

Abstracts of the Medical Academic Congress of Piauí

Original Research

01. CHARACTERIZATION OF PREGNANT WOMEN IN PRENATAL CARE AT A PUBLIC MATERNITY IN NORTHEAST BRAZIL

Ariane Carneiro de Souza¹, Walberth Gabriel Cardoso dos Santos¹, Maria Laura de Lima Brito Magalhães¹, Francisco José Diniz dos Santos Júnior¹, Jonatas Paulino da Cunha Monteiro Ribeiro¹ and Rosilane de Lima Brito Magalhães¹.

¹ Federal University of Piauí.

INTRODUCTION: Gestational and congenital syphilis represent a significant public health challenge in Brazil, as its prevalence has been increasing despite prevention and control policies recommended by the Ministry of Health. Syphilis is a sexually transmitted infection that can be transmitted vertically from mother to child. Early diagnosis and appropriate treatment are essential to prevent complications for pregnant women and adverse outcomes, including spontaneous abortion, fetal death, and various clinical manifestations in newborns. Effective strategies in education, testing, and treatment are crucial to mitigate the impact of this disease on the Brazilian population.

OBJECTIVES: To characterize pregnant women receiving prenatal care and to identify factors associated with vertical transmission.

METHODS: This is an analytical cross-sectional study conducted from November 2023 to January 2024. The study included 165 pregnant women receiving care at two public maternity hospitals in a capital city in northeastern Brazil. A validated instrument was used for data collection, with questions on sociodemographic characteristics, sexual behavior, and knowledge and attitudes regarding syphilis vertical transmission. The Chi-square test was used to investigate associations between knowledge, attitudes, and vertical transmission, considering a significance level of $p < 0.05$. The study met ethical guidelines under protocol number 54993521.0.0000.521.

RESULTS AND DISCUSSION: Of the 165 participants, most were under 30 years of age, representing the peak of women's reproductive age. Educational levels varied, with most participants having over nine years of education up to high school. Other studies have linked lower educational attainment with a higher prevalence of gestational syphilis, as well as an increased risk of exposure to other sexually transmitted infections (STIs). In line with this, 43% of participants did not use condoms during their first sexual encounter, and 125 women reported not using condoms during intercourse. The study showed that the majority of pregnant women were non-white and depended on government income support programs, with 40% falling into this category. Regarding access to healthcare, 87.3% did not receive a syphilis diagnosis during prenatal care, and 74.5% were unaware of their partner's serological status. Additionally, most participants indicated awareness that syphilis could be transmitted through

unprotected sexual intercourse and from mother to child.

CONCLUSION: The study demonstrated that factors associated with social exclusion, such as low income and lower educational attainment, contribute to the persistence of high rates of vertical transmission of syphilis. Therefore, it is inferred that concerted efforts from all healthcare professionals are necessary for early diagnosis and effective treatment of syphilis in pregnant women, to protect maternal health and reduce vertical transmission.

02. EFFECT OF ACUTE AND CHRONIC TREATMENT WITH (-)-BORNEOL AS AN ALTERNATIVE FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM

Ariane Carneiro de Souza¹ and Aldeídia Pereira De Oliveira¹.

¹Laboratory of Cardiovascular Pharmacology-NPPM/UFPI,

^{1,2}Center for Research on Medicinal Plants, Federal University of Piauí, Terezina, 64049-550, Brazil.

INTRODUCTION: Venous thromboembolism (VTE), which encompasses pulmonary embolism (PE) and deep vein thrombosis (DVT), is a serious condition with similar risk factors, being the third most common cause of acute cardiovascular syndrome. Blood coagulation forms thrombi through thrombin and platelets, preventing hemorrhages via vascular spasm, platelet plug formation, and coagulation. (-)-Borneol shows potential as a vasorelaxant and platelet aggregation inhibitor for VTE prevention. **OBJECTIVES:** To evaluate the influence of acute and chronic treatment with (-)-borneol on bleeding time and coagulation parameters. **METHODS:** This research was experimental, and the procedures were approved by the Animal Ethics Committee (CEUA) of the Federal University of Piauí (UFPI), according to protocol CEUA/UFPI 562/19. Wistar rats (*Rattus norvegicus*) weighing between 200 and 300 g from the UFPI Sectorial Biotherium were used. The technique involved analyzing primary hemostasis by Bleeding Time (Duke Method). The animals were divided into three groups: Saline Group (4 rats), (-)-Borneol Group (4 rats), and ASA Group (4 rats). The solutions were administered by gavage (oral route), and the bleeding time was analyzed after 30, 60, and 120 minutes. To assess anticoagulant activity, 24 Wistar rats were divided into six groups of four animals. They were treated for 7 days with: saline (0.5 ml/kg), sodium heparin (1000 U/kg), (-)-borneol (100, 50, and 25 mg/kg), and ASA (100 mg/kg). After treatment, blood was collected from the inferior vena cava under anesthesia (75 mg/kg of ketamine and 10 mg/kg of xylazine). Plasma was obtained by centrifugation at 3000 rpm at 4°C for 15 minutes and analyzed for PT and aPTT. Results were expressed as mean \pm standard error of the mean (SEM) and analyzed by One-way ANOVA followed by Tukey's post-test ($P < 0.05$), using GraphPad Prism© 6 software. **RESULTS AND DISCUSSION:** The bleeding time was less than 210 seconds, with an average of 105 seconds per episode. Larger drops of blood

were observed in the ASA 100 mg/kg group, indicating a progressive increase in bleeding time over the intervals. (-)-Borneol appears to affect vascular hemostasis in response to injury, evidenced by the bleeding time pattern with progressively smaller drops. This was observed in both the Saline Group and the (-)-Borneol 100 mg/kg Group, which showed a gradual reduction in bleeding times between 30 and 120 minutes. In animals treated with (-)-borneol, significant antiaggregating activity was inferred, especially at 50 mg/kg, similar to ASA 100 mg/kg. The prothrombin time in groups treated with (-)-borneol did not differ from the Saline group, indicating a low risk of thrombosis, confirming that (-)-borneol has a greater antiaggregating effect than anticoagulant effect. **CONCLUSION:** We conclude that coagulation is complex and involves multiple factors. (-)-Borneol affects platelet aggregation and clot formation, but its interference with coagulation is discreet, not increasing the risk of thrombosis.

03. HOSPITALIZATIONS DUE TO TRAUMATIC BRAIN INJURY IN THE STATE OF PIAUÍ: A DECADE-LONG ANALYSIS

Alice Rayane Ferreira da Silva¹; Rafael Armando Coutinho Aguiar¹; Artur Guilherme Feitosa Ferreira¹; Arthur Vinícius Lôbo Siqueira Lira¹; Eric Marcelo Dias da Silva¹; Arquimedes Cavalcante Cardoso¹.

¹ Federal University of Piauí.

INTRODUCTION: Traumatic brain injury (TBI) is a pathological process with high associated morbidity and mortality, being one of the leading causes of acquired disability worldwide. Moreover, it is estimated that, in Brazil, trauma patient care may cost between 28 to 30 billion reais per year. Therefore, given the significant impact of TBI on public health, it is crucial to study its trends and epidemiological characteristics. **OBJECTIVE:** To analyze cases of hospitalizations caused by traumatic brain injury in the state of Piauí over a decade. **METHODS:** This is an epidemiological, documentary, and quantitative study of an exploratory, descriptive, and retrospective nature, based on data on TBI hospitalizations from 2013 to 2023, obtained from the Hospital Information System of the Unified Health System (SIH/SUS) through the Department of Informatics of the Unified Health System (DATASUS). Variables were tabulated and analyzed using GraphPad Prism. **RESULTS:** In the state of Piauí, there were 24,397 hospitalizations due to TBI over the past decade, with the municipality of Teresina accounting for 15,634 of the total hospitalizations (64.08%). In 2018, there was a peak in interventions with 2,705 procedures approved through Hospitalization Authorization (AIH), corresponding to about 11.08% of the total in the decade. In contrast, 2020, marked by the COVID-19 pandemic, showed a decrease with 1,993 hospitalizations, equivalent to approximately 8.16%. Men were the most affected, with 81.09% (19,784 cases). Additionally, the age group of 20 to 39 years was the most affected, with 42.97% (10,484 cases), aligning with previously published data. The primary hypothesis for this group being most affected is their higher exposure to risks such as alcohol consumption and vehicle driving, making them more vulnerable to traffic accidents. The highest mortality rate (MR) was among those over 80 years old (20.44%), with an overall MR of 10.37% for the selected period. Higher lethality among the elderly is also highlighted in the literature, with causes more associated with falls, unlike younger groups. In terms of costs to the health system, the total cost of hospitalizations amounted to R\$39,166,523.48 during this period, with an average cost per AIH of R\$1,605.38, reflecting the high financial impact of these procedures on the public health system. **CONCLUSION:** The study revealed a trend of reduced hospitalizations in 2020, possibly influenced by the COVID-19 pandemic. Additionally, hospitalizations due to TBI were

more frequent in the state capital, affecting mainly males and the 20-39 age group. Thus, it is evident that these cases primarily impact the economically active population and may result in disability. Therefore, given the economic and social impact, it is necessary to encourage further studies on the subject to enable the development of more effective public policies for prevention and reduction of public expenses.

04. HOSPITALIZATIONS DUE TO SEXUALLY TRANSMITTED INFECTIONS: EPIDEMIOLOGICAL ANALYSIS AMONG INDIVIDUALS AGED 15 TO 29 IN THE CITY OF TERESINA

Alice Rayane Ferreira da Silva¹; Artur Guilherme Feitosa Ferreira¹; Livia Vilarinho Santos Barbosa¹; Arthur Vinícius Lôbo Siqueira Lira¹; Anna Clara Lopes Lopes Bonfim Amorim¹; Gírlene Soares de Figueirêdo¹.

¹ Federal University of Piauí.

INTRODUCTION: Sexually transmitted infections (STIs) are a group of diseases transmitted through sexual contact, vertical transmission, and contaminated bodily secretions. The early onset of sexual activity among young people, often associated with a lack of knowledge about sexuality and contraceptive methods, increases vulnerability and the risk of contracting STIs. **OBJECTIVES:** To assess the epidemiological profile of hospitalization records for STIs between 2017 and 2023 among individuals aged 15 to 29 in the city of Teresina. **METHODS:** This study is an epidemiological, documentary, and quantitative study of an exploratory, descriptive, and retrospective nature, based on data regarding hospitalizations for STIs in the city of Teresina for the period 2017 to 2023, obtained from the Hospital Information System of the Unified Health System (SIH/SUS), through the Department of Informatics of the Unified Health System (DATASUS). The study population consists of individuals aged 15 to 29 hospitalized due to STIs, classified under the categories "Predominantly sexually transmitted infections" (A50-A64) and "Human immunodeficiency virus diseases" (B20-B24) according to the International Classification of Diseases (ICD-10). Variables were tabulated and analyzed using GraphPad Prism. **RESULTS:** During the analyzed period, 646 hospitalizations due to STIs were reported among individuals aged 15 to 29. The negative linear regression rate of approximately -20.57 cases per year indicates a trend of decreasing hospitalizations over the analyzed years. HIV accounted for most hospitalizations, corresponding to 94.11% of the total. Congenital syphilis occurred in 0.93% of the cases, while syphilis, gonococcal infection, and sexually transmitted chlamydial infections each accounted for 0.15% of the hospitalizations. A total of 86 deaths were recorded during this period, with an overall mortality rate of 13.32%. Regarding sex, men presented a significantly higher hospitalization rate than women, representing 58.2% of the total. The higher prevalence of HIV infections compared to other STIs suggests a potential lack of access to early diagnosis and adequate treatment for the population of Teresina. The predominance of cases among men is consistent with the literature and may be attributed to more frequent risk behaviors, such as multiple sexual partners and lower self-care compared to women. The presence of other STIs points to the underuse of contraceptive methods and the lack of effective sexual education among young people. The mortality rate may be associated with late diagnoses and inadequate access to treatment. **CONCLUSION:** The study revealed a trend of decreasing hospitalizations due to STIs among individuals

aged 15 to 29. However, HIV accounted for most of the hospitalizations, indicating a significant lack of access to early diagnosis and adequate treatment. The predominance of cases among men and the high mortality rate highlight the need for improvements in prevention and sexual education. Future research should assess the effectiveness of current interventions in the Unified Health System (SUS).

05. **CONGESTIVE MYELOPATHY AS A PRESENTATION OF A DURAL FISTULA: A CASE REPORT**

Felipe Tolstenko Nogueira Ayres Câmara¹, Aline Gomes da Costa¹, Angra Cristina Silva Fontinele de Sousa¹, Eliomar de Carvalho Santos Filho¹, Michelly Bruna Soares de Moura¹, Tibério Silva Borges dos Santos².

¹ Federal University of Piauí; ² University Hospital of Piauí.

INTRODUCTION: Spinal dural arteriovenous fistula (SDAVF) is a rare disease with an etiology that is not yet fully understood. These are cerebrovascular lesions resulting from abnormal connections between an artery and a vein. Although uncommon, high-grade aggressive lesions can cause hemorrhagic events and non-hemorrhagic neurological deficits if left untreated. Clinical presentation and imaging findings can be nonspecific and confusing, often leading to the misdiagnosis of other conditions, such as demyelinating or degenerative spinal diseases. **CASE REPORT:** A 61-year-old man from Teresina, Piauí, Brazil, retired due to visual impairment, presented with sudden symmetric weakness of the lower limbs on August 16, 2023, progressing within minutes to complete loss of strength associated with double incontinence. The following day, he sought medical attention at a Hospital in Teresina, where he was hospitalized and underwent indwelling urinary catheterization. He was then transferred to a Teresina Emergency Hospital, where a thoracic spine MRI was performed, with suspicion of extensive myelitis affecting vertebrae T6 to T11. At the same facility, he underwent five days of pulse therapy and had a lumbar puncture on the 14th day after symptom onset, ruling out infections. He was later transferred to the University Hospital and discharged with a prescription for home physiotherapy. Clinical improvement was reported over the next five months following the initial hospitalization. However, after this period, the patient sought medical attention again due to reduced strength in the lower limbs and impaired walking, as well as significant dorsalgia. At that time, he reported self-medication with azithromycin and ibuprofen for the treatment of urethritis. During hospitalization, the patient was alert, oriented, on continuous dipyrone use for lower back pain, and with a urinary catheter. Magnetic resonance imaging (MRI) scans of the brain and spine taken on March 5, 2024, indicated brain volumetric reduction characterized by accentuation of brain fissures and cortical gyral sulci, as well as a hyperintense spinal cord signal in the thoracic spine on T2-weighted sequences with a swelling appearance, along with atlanto-axial degenerative changes and small marginal osteophytes in the cervical vertebral bodies. After spinal angiography, he was diagnosed with an acquired spinal arteriovenous fistula, and endovascular intervention for vascular malformation embolization was scheduled. Following discussions about the risks and benefits of continued hospitalization, he was discharged with a follow-up dependent on the availability of the procedure. **FINAL CONSIDERATIONS:** Arteriovenous fistulas can present in a nonspecific or confusing manner in both clinical presentation and imaging studies. After extensive investigation, the patient was diagnosed with an acquired spinal arteriovenous fistula, which resulted in the development of myelopathy. Due to its rarity and the

potential severity of symptoms, greater interest and dissemination of knowledge about this disease are needed, as its etiology is not completely understood. This impacts the ability to make an early diagnosis and intervene with a better chance of recovery, which is crucial for the patient's prognosis and outcome.

06. **COMPARATIVE ANALYSIS OF MATERNAL DEATHS BETWEEN BRAZIL, NORTHEAST REGION, AND PIAUÍ FROM 2013 TO 2022**

Guilherme Moura Lima Portela Santos¹, Gielson de Sousa Silva¹, Maria Júlia Lima Amorim¹, Ângelo Brito Rodrigues¹.

¹ State University of Piauí.

INTRODUCTION: Maternal mortality is an indicator of the quality of healthcare and social welfare systems, reflecting disparities in access to and quality of healthcare services offered to pregnant women.

OBJECTIVES: To compare the epidemiological profile of maternal mortality cases in Piauí, the Northeast, and Brazil from January 2013 to December 2022. **METHODS:** An ecological, descriptive, and retrospective study was conducted on maternal deaths in Piauí, the Northeast, and Brazil, from January 2013 to December 2022. Data obtained from the Sistema de Informação de Agravos e Notificações (SINAN) included variables such as race, age group, education level, and type of maternal death. Microsoft Excel® was used for data tabulation and analysis. **RESULTS:** Regarding age group, the most affected in the Northeast and Brazil was the 30-39 age group, representing 41% (1,971) and 42% (6,778) of cases, respectively. In Piauí, however, the 20-29 age group was most affected, with 41% of cases (155). In all three regions, the mixed-race population was the most affected, with 73% of cases in Piauí, 68% in the Northeast, and 52% in Brazil. In terms of education, the 8 to 11 years category was the most prevalent in all three regions, with 30% of cases in Piauí, 36% in the Northeast, and 42% in Brazil. The year 2021 saw the highest increase in the maternal mortality ratio (MMR), with increments of 173% in Brazil, 151.5% in the Northeast, and 145.1% in Piauí. The highest MMRs in the studied period were also observed in 2021, with 94.67 in Brazil, 86.95 in the Northeast, and 114.6 in Piauí. During this period, the average MMR was 54.7 in Brazil, 57.3 in the Northeast, and significantly higher in Piauí, at 79. During the COVID-19 pandemic, especially between 2020 and 2021, there was a significant increase in MMR. In Brazil, the MMR rose from 57.7 in 2020 to 94.6 in 2021, an increase of approximately 63.8%. In the Northeast, it rose from 65.9 in 2020 to 86.9 in 2021, an increase of approximately 31.89%. In Piauí, the MMR increased from 70.8 in 2020 to 114.6 in 2021, an increase of about 61.7%. Regarding the type of maternal death, direct obstetric death was the most prevalent during most years except 2021, accounting for 59% (9,430), 64% (3,044), and 70% (267) of cases in Brazil, the Northeast, and Piauí, respectively. In 2021, however, in all three regions, indirect maternal death became the most prevalent, representing 65.7% (1,809), 59.1% (428), and 54.5% (30) in Brazil, the Northeast, and Piauí, respectively. **CONCLUSION:** Direct obstetric death remains a significant cause of maternal morbidity in Brazil, reflecting deficiencies in prenatal care and primary healthcare for pregnant and postpartum women. Mobilizing resources to mitigate this situation is crucial.

07. **NOISE-INDUCED HEARING LOSS IN BRAZIL: EPIDEMIOLOGICAL ASPECTS FROM 2018 O 2023**

Brenda Rayanne Alves Soares¹, Jéssica Lima Barradas¹, Vitória de Jesus da Silva Moraes Costa¹, Maria Clara da Cunha Mendes Costa¹, Izane Luísa Xavier Carvalho Andrade¹.

¹UniFacid University Center.

INTRODUCTION: Noise-Induced Hearing Loss (NIHL) is the loss of hearing caused by prolonged and recurrent exposure to loud noises. NIHL is mostly bilateral, sensorineural, progressive and irreversible, generating significant impacts on workers' health. It is understood that hearing loss caused by work is due to other causal factors, such as vibration, heat and chemical emissions, with noise being the main risk factor for hearing loss.

OBJECTIVE: To describe the epidemiological aspects related to NIHL in Brazil between 2018 and 2023. To describe the epidemiological aspects related to NIHL in Brazil between 2018 and 2023. **METHODS:** This is a descriptive and retrospective epidemiological study with a quantitative approach. The information was obtained from the Notifiable Diseases Information System (SINAN) - DATASUS regarding the number of reported cases of NIHL from 2018 to 2023. The variables year of notification, Federative Unit (UF), age group, race, gender, time of exposure, type of noise, CAT (Communication of Accident at Work) were checked and tabulated using the Microsoft Excel program. **RESULTS AND DISCUSSION:** According to the data verified, 3,334 cases were reported, with 2019 having the highest number of cases, 745 (22.3%), and 2023 the lowest, 480 (14.39%). In terms of state, São Paulo stands out with the highest number of cases at 822 (24.6%), with the highest record in 2018 at 227 (27.6%), and Rio Grande do Sul with 666 (19.9%), with Acre, Amapá, Piauí and Espírito Santo with 1 case (0.02%) each, showing the lowest number of reported cases. With regard to age group, the most significant rate was between 50 and 64 years old, with 1,425 total cases (42.7%). When looking at race, it was found that white people had the highest rate with 1,512 cases (45.3%). Males accounted for the majority of cases, with 2,942 cases (88.2%), while females accounted for 392 cases (11.8%). Regarding exposure time, it was noted that the year 2019 recorded 139 hours (34.4%), the highest number of hours of noise exposure, followed by the year 2021 with 100 hours (24.4%). As for the type of noise, there were 1164 cases (34.9%) of continuous noise, 817 cases (24.5%) of intermittent noise and 736 cases (22%) of both. In addition, 1526 cases (45.7%) were found to be 'no' and 302 cases (9.05%) were found to be 'yes' in relation to the CAT issued. **CONCLUSION:** Given the data presented, it can be concluded that there was a decrease in NIHL in 2023 when compared to 2019, the year with the highest number of cases. The highest number of cases was recorded in São Paulo, followed by Rio Grande do Sul. The age group with the highest rate of NIHL was 50 to 64 years, the most affected race was white and males were the most affected. As for the time of exposure, the year 2019 had the longest, continuous noise is the one that most affects the population, significantly affecting the health of the worker, and the majority of cases had "no" in relation to the issuance of CAT.

08. **CHILD DEATHS FROM DROWNING AND ACCIDENTAL SUBMERSIONS IN BRAZIL: AN EPIDEMIOLOGICAL ANALYSIS FROM 2019 TO 2023**

Brenda Rayanne Alves Soares¹, Vitória de Jesus da Silva Moraes Costa¹, Jéssica Lima Barradas¹, Maria Clara da Cunha Mendes Costa¹, Izane Luísa Xavier Carvalho Andrade¹.

¹ UniFacid University Center.

INTRODUCTION: Drowning is the aspiration of non-corporeal fluid through submersion or immersion, and is considered one of the main causes of infant mortality, especially in young children. The most significant pathophysiological alteration is hypoxia, which can cause various repercussions in the body, such as reduced cardiac output, arterial hypotension and pulmonary hypertension. It is understood that this type of accident is quick, silent and has a high potential for lethality. **OBJECTIVE:** To describe the epidemiological aspects related to infant deaths in Brazil between 2019 and 2023. **METHODS:** This is a descriptive epidemiological study, based on information acquired from the Mortality Information System (SIM). The following parameters were analyzed: Year, region, sex, race, cause categories and character of care, and the data analysis was delimited in the age group under 1 year to 9 years. **RESULTS AND DISCUSSION:** According to the data, 122 cases were reported in the period analyzed, with the year 2021 having the highest number of cases, 27 (22.1%). In terms of region, the Southeast region stood out with the highest number of cases with 57 cases (46.7%), followed by the Northeast region with 30 cases (24.5%). It was also found that males accounted for the majority of cases, with 81 cases (66.3%), while females accounted for 41 cases (33.7%). When looking at race, it was found that brown people had the highest rate with 54 cases (44.2%). Deaths from drowning and submersion in swimming pools were the most common, with 46 cases, while deaths from drowning and submersion while bathing in a bathtub accounted for 1 case, making it the lowest number of cases. In addition, the predominant type of care was emergency care with 105 cases (86%), confirming the potential seriousness of drowning accidents. **CONCLUSION:** In view of the data presented, it can be concluded that the year 2021 had the highest rate of child deaths due to drowning and accidental submersion during the period analyzed, and the southeast and northeast regions had the most cases, respectively. In addition, with regard to the population, it can be seen that the majority of victims were male and of brown race and that most drownings and submersions occurred in swimming pools and the predominant type of care was emergency. It is therefore necessary to implement multidisciplinary strategies aimed at preventing cases.

09. **THE CYTOKINES (IL-4, TNF- α e IL-10) EXPRESSION AND THE INFLAMMATORY RESPONSE IN THE DOGS LINFONODES NATURALLY INFECTED BY *Leishmania infantum*** Brenda Vitor Alves de Araújo Portela¹, João Vitor Lima Varão¹, Cauã Luis Silva Ribeiro Cutrim¹, Oscar Correia de Fonseca², Dayse Cristina Fernandes Barros¹, Bárbara Laurice Araújo Verçosa^{3,4}.

¹Medical student – Pitagoras Medicine College of Codó;

²Msc Farmacology – Federal University of Piauí; ³Professor of Medicine – Pitagoras Medicine College of Codó; ⁴PhD Science – Molecular Biology, Biological Sciences Institute (ICB) – Federal University of Minas Gerais (UFMG)

INTRODUCTION: Visceral Leishmaniasis (VL), caused by species of the protozoan genus *Leishmania*, mainly by *Leishmania infantum* (L. infantum), is a neglected tropical disease that can be transmitted from animals (dogs being the intermediate hosts, the main foci of the parasite) to humans – or definitive hosts, through the blood meal carried out by the sandfly *Lutzomyia longipalpis* caused primarily by *Leishmania infantum* (L. infantum), is a neglected tropical disease transmitted from animals, with dogs serving as the main reservoir hosts, to humans, the definitive hosts, via the blood meal of the sandfly *Lutzomyia longipalpis*. Pro-inflammatory cytokines, such as tumor necrosis factor alpha (TNF- α) and interferon gamma (INF- γ), produced by macrophages, can cause induce the death of the parasite, while anti-inflammatory cytokines, such as interleukins IL-4, IL-6 and IL-10 can contribute to the survival of *Leishmania* within cells, which will or will not reveal the clinical form presented. In contrast, anti-inflammatory cytokines, including interleukins IL-4, IL-6, and IL-10, contribute to the survival of *Leishmania* within host cells, influencing the development of clinical symptoms. **OBJECTIVES:** To evaluate lymph node lesions and the expression of the main key cytokines associated related with the inflammatory response to L. infantum infection in lymph node tissues to the inflammatory response of lymph nodes against L. infantum. **METHODS:** Fragments of popliteal lymph nodes were collected from infected dogs, both with and without clinical signs, as well as from uninfected control dogs with and without clinical signs, and control dogs negative for the disease. The expression of INF- γ , TNF- α , TGF- β , IL-4, IL-6, IL-12, and IL-10 was quantified in lymph node tissues using q RT-PCR. Expression levels in the infected dogs were compared to those in the uninfected control group, and their expression levels were downregulated in uninfected control group ratio. All procedures followed the guidelines established by the local Institutional Animal Care and Use Committee (CETEA, Federal University of Minas Gerais, protocol nº 198/2007, approved on 03/27/2008). **RESULTS:** Symptomatic infected dogs exhibited presented a higher mRNA expression of IL-4 (Mann Whitney test, $p = 0.0273$) and IL-10 (Mann Whitney test, $p = 0.0104$) in their lymph node tissues. However, a higher expression of TNF- α mRNA (Mann Whitney test, $p = 0.0443$) was found in subclinical subjects, which demonstrates a close relationship between anti-inflammatory cytokines and the presence of clinical symptoms. According to the correlations between cytokines, IL-4 and IL-10 were positive (Spearman test, $r = 0.54$, $n = 13$, $p = 0.007$) in mRNA expression levels in lymph node tissues. A positive correlation was found between IL-4 and IL-10 mRNA expression levels in lymph node tissues (Spearman test, $r = 0.54$, $n = 13$, $p = 0.007$). The TNF/IL-4 ratio (Spearman test, $r = -0.63$, $n = 10$, $p = 0.04$) demonstrating suggests that the pro-inflammatory

response surpasses the anti-inflammatory response in the parasitic invasion of asymptomatic dogs, which makes symptoms absent that the pro-inflammatory response overlaps with the anti-inflammatory response during parasitic invasion in asymptomatic dogs, potentially contributing to the lack of clinical symptoms. **CONCLUSION:** The expression of cytokines in dogs naturally infected by with *Leishmania infantum* is capable of modulating the inflammatory response and consequently the clinical form that the animals present. This is because the higher the expression of TNF- α , the lower the presentation of symptoms, which is observed in asymptomatic dogs, while the opposite relationship occurs in symptomatic dogs, with high levels of IL-4 and IL-10.

10. **TRAINING ON PREVENTION AND INTERVENTION IN ACCIDENTS WITH CHILDREN AND ADOLESCENTS IN THE MUNICIPALITY OF TERESINA-PI**

Amanda Carlos Ferreira Duarte¹, Letícia da Silva Andrade¹, Anna Émille Almeida Moura¹, Joana Elisabeth de Sousa Martins Freitas¹, Igor Mascarenhas de Sousa e Silva¹, Dênnia Jackeline de Alencar Soares¹.

¹ UNIFACID WYDEN.

INTRODUCTION: Accidents are currently identified as sources of external causes, and culturally they are defined as situations that cannot be avoided. However, new regulations consider accidents as predictable events. Researchers point to accidents as being susceptible to monitoring and/or avoiding through physical, material, emotional and social care, making the “accidentality” of these events subject to debate and reiterating the need to talk about prevention.

OBJECTIVE: The objective of the project is to adequately guide the population about the risks of the most common accidents involving children and adolescents aged 0 to 14 years, disseminating methods for preventing them. **METHODOLOGY:** The strategy relies on the participation of community leaders, health agents and caregivers who are part of the underprivileged communities in the urban area of Teresina-PI. In this way, we provide the community with information on the prevention of the main accidents involving children and adolescents aged 0 to 14 years and how to avoid them. The main types of accidents are: drowning, burns, suffocation, falls, firearm accidents and traffic accidents. Informative materials (pamphlets, videos, slides) are used, offered in lectures in the most diverse environments reaching parents, guardians and caregivers. These materials were prepared using Microsoft PowerPoint tools, educational videos, simulation of rescue by suffocation and/or choking using mannequins (dolls). The project is currently active where interventions were made in schools and UBS in the north zone of Teresina-PI presenting a positive impact on the target audience. The referred research project submitted for consideration by the Research Ethics Committee (CEP) and authorized with CAEE number: 69395823.9.0000.5211 complies with resolutions Nº 466/12 and Nº 510/16. We used a printed satisfaction form with subsequent analysis of the quality of the intervention and signatures in the TCLE. **RESULTS AND DISCUSSION:** Lectures were given in 2 schools and 1 UBS in the northern area of Teresina-PI, with a sample of 68 people who signed the TCLE and answered the satisfaction questionnaire, where 100% of the participants felt prepared to deal with emergency situations with children and adolescents, 100% intended to share information about the lecture with other people, 100% found the lectures informative, favoring awareness of the main accidents with children and adolescents. **CONCLUSION:** Thus, it is valid and relevant to transmit this knowledge to the community as a way to guarantee the growth

and development of children and adolescents in a healthy and safe way and consequently generating a positive impact on the intention of reducing accident statistics in this population.

11. EPIDEMIOLOGICAL PROFILE AND OUTCOMES OF WORK-RELATED MENTAL DISORDERS IN THE NORTHEAST REGION

Jéssica Lima Barradas¹, Brenda Rayanne Alves Soares¹, Isabelle Lima Barraadas², Maria Clara da Cunha Mendes Costa¹, Vitória de Jesus da Silva Moraes Costa¹ and Izane Luísa Xavier Carvalho Andrade³.

¹ UniFacid University Center; ² State University of Piauí; ³ Estácio College of Alagoinhas.

INTRODUCTION: Work-related mental disorders are those that arise from circumstances in the work environment, stemming from specific elements such as exposure to certain harmful agents and complex combinations of factors related to work organization, including task division and fragmentation, personnel management policies, workplace bullying, and the hierarchical structure of the organization. Under conditions of vulnerability, individuals are more likely to develop mental disorders. **OBJECTIVES:** To assess the incidence and outcomes of work-related mental disorders in northeastern Brazil. **METHODS:** This descriptive epidemiological study was conducted from January 2012 to December 2023, focusing on work-related mental disorders based on data obtained from the Health Informatics Department of the Unified Health System (DATASUS). The study analyzed the following parameters: gender, education level, specific diagnosis, duration of exposure, and case evolution. **RESULTS:** The majority of reported cases in northeastern Brazil were among females, totaling 3,662 cases (58.65%), likely due to endocrine changes occurring during premenstrual, postpartum, and menopausal periods. Regarding education level, 1,873 cases (38.71%) were individuals with a complete higher education, while the lowest proportion involved illiterate individuals, with a total of 18 cases (0.37%), likely due to the skill requirements in jobs demanding these levels of education. In terms of diagnosis, 2,419 cases (48.47%) were related to neurotic, stress-related, and somatic disorders, while only 27 cases (0.54%) were associated with organic mental disorders, in part due to the high demands and competitiveness in these environments. Concerning case duration, 3,778 cases (82.72%) evolved over years, while 68 cases (1.48%) progressed in days, revealing a chronic pattern of these disorders in the workplace. Lastly, regarding case outcomes, the majority of individuals progressed to temporary disability, accounting for 4,299 cases (86.20%), while 35 cases (0.70%) led to total permanent disability. This suggests that improving individual health may require distance from the distressing work environment. **CONCLUSION:** The primary vulnerable group includes females with complete higher education, experiencing neurotic, stress-related, and somatic disorders, characterized by chronic patterns and progression to temporary disability. Thus, it is recommended to strengthen public policies and improve labor representation organizations to support this group in overcoming stigmas and accessing appropriate care.

12. ANALGESIC AND ANTI-INFLAMMATORY ANALYSIS OF ETHANOLIC EXTRACT FROM THE BARK OF THE STEM OF ANACARDIUM OCCIDENTALE

Antonio Levi Farias Borba¹, Victor José Campelo Vilanova¹, Filipe De Carvalho Soares¹, Heloísa Cronenberg Rufino Madeiro¹, Mariana de Sousa Silva², Rosemarie Brandim Marques³.

¹State University of Piauí; ²Master's Student at the State University of Piauí; ³Faculty Member at the State University of Piauí.

INTRODUCTION: *Anacardium occidentale*, commonly known as cashew, is a small tree with a twisted trunk, smooth leaves, and kidney-shaped fruits. The extract from this plant is rich in polyphenolic acids, procatechins, gallic acid, flavonoids, rhamnosides, and phenolic compounds, making it the subject of pharmacological studies for its antifungal, antimicrobial, and anti-inflammatory properties. **OBJECTIVE:** Evaluate the analgesic and anti-inflammatory effects of the ethanolic extract from the bark and stem of *Anacardium occidentale*. **METHODS:** This study was approved by the Ethics Committee on Animal Use (CEUA/Uespi) under number 009307/2023-48, and registered with SisGen under number A5703C6. The study included albino mice (*Mus musculus*), Swiss variety, randomly selected and divided into groups. The groups included a negative control, a positive control with morphine, and test groups receiving different doses of *A. occidentale* ethanolic extract (EEAO). Analyses were performed using the abdominal writhing test induced by 1% acetic acid. **RESULTS:** The doses of 50, 100, and 200 mg/kg resulted in a statistically significant reduction in writhing frequency compared to the negative control ($p < 0.05$). **DISCUSSION:** The abdominal writhing test demonstrated the analgesic potential of EEAQ by reducing the writhing frequency in treated mice compared to the control group. The highest dose (200 mg/kg) showed a dose-dependent effect. **CONCLUSION:** The study suggests that the ethanolic extract of *Anacardium occidentale* exhibits significant analgesic and anti-inflammatory effects. However, further studies are needed to clarify the mechanisms of action.

13. KNOWLEDGE TRANSLATION ACTIVITIES ON SOCIALLY DETERMINED DISEASES AT THE 22ND PIAUÍ BOOK FAIR: AN EXPERIENCE REPORT

Raí de Moura Ribeiro¹, Davi Kauan Soares Leal¹, Lara Beatriz de Sousa Araújo¹, Fábio Solon Tajra¹, Isabela Santiago Leão¹ and Bruno Guedes Alcoforado Aguiar¹.

¹ State University of Piauí.

INTRODUCTION: Brazil is marked by profound social and territorial disparities, which facilitate the persistence of diseases that disproportionately affect specific populations, such as people in areas of higher social vulnerability. These so-called socially determined diseases (SDDs) pose significant challenges to public health in Brazil. Despite efforts to build knowledge, prevent, and control these conditions, issues like dengue, leprosy, Chagas disease, tuberculosis, and leishmaniasis remain prevalent and stigmatized in society. In this context, conducting interventions to translate and disseminate scientific knowledge about these diseases to the Brazilian population is essential. **OBJECTIVES:** To describe the experience of medical and nursing students and researchers from the Federal University of Piauí in

carrying out a university research project. **METHODS:** This is an experience report based on participation in the activities of the research project "Construction of Evidence Maps for Socially Determined Diseases: Arboviruses, Leprosy, and Chagas Disease as a Basis for Health Policies in SUS." Activities were directed to the general public and also adapted for children, taking place during the 22nd Piauí Book Fair in various formats, including puppet theater, drawing and coloring, a monacle stand, and an art exhibition. Topics covered included neglected diseases such as Chagas disease, tuberculosis, leprosy, arboviruses, and leishmaniasis. The activities took place from June 8 to June 16, 2024. **RESULTS AND DISCUSSION:** Puppet theater and drawing activities were used as educational tools to engage children's attention, utilizing these moments to convey adapted information on pathophysiological concepts, clinical manifestations, treatment, and cultural aspects surrounding neglected diseases. The monacle stand displayed photos of etiological agents and vectors of some SDDs, with monitors presenting information about these conditions, which aroused curiosity among the general public. In addition to physiological aspects, the social dimension was also addressed through artistic expression, with the exhibition of paintings, drawings, and poetry aiming to raise awareness about the social stigma faced by people with leprosy. During the activities, we noted a strong public interest in dengue and a general lack of knowledge about other conditions, particularly leishmaniasis. From the students' perspective, the project enabled the development of communication skills, empathy, and community engagement. **CONCLUSION:** This activity proved valuable in bridging various age groups with scientific knowledge about socially determined diseases, using health education and art as effective tools for health promotion. Furthermore, the initiative facilitated stronger connections between the academic community and society.

14. **DEMOGRAPHIC PROFILE OF URGENT HOSPITALIZATIONS FOR MENTAL AND BEHAVIORAL DISORDERS CAUSED BY ALCOHOL AND OTHER PSYCHOACTIVES IN BRAZILIAN NORTHEAST: AN EPIDEMIOLOGICAL PROFILE OF THE LAST DECADE**

Bruna Wendy Capistrano Pinto¹, Orley Cavalcanti Pacheco Neto¹, Raissa Lages Neiva¹, Paloma Barbosa Lima¹, Julia Tajra Tobias Mourão¹ and Antônio Felipe Fenelon Aguiar¹.

¹ University Center Uninovafapi-Afya.

INTRODUCTION: Ailments related to alcohol and psychoactive substance use are associated with mental and behavioral disorders that lead to greater morbidity and to significant increase in the number of hospitalizations due to abusive use. **OBJECTIVES:** To characterize the demographic profile of patients admitted to urgent care due to alcohol and psychoactive substance use. **METHODS:** We conducted an epidemiological, observational and descriptive study with a quantitative approach using the SUS (Single Health System) Hospital Information System. We obtained data on emergency hospital admissions due to mental and behavioral disorders caused by psychoactive substance use and alcohol use in the Northeast of Brazil from 2014 to 2023, specifying age group and gender. Set data were analyzed through Microsoft Excel 2016 and the results were presented as absolute value and mean. **RESULTS:** In the years 2014 to 2023, the total number of hospitalizations for mental and behavioral disorders due to psychoactive substance use was 8,140

females (FE) and 32,948 males (MA). When the cause was alcohol, there were 3,906 FE cases and 29,830 MA cases. In all age groups, except for women aged 40 to 49 and men aged 30 to 39 and 40 to 49, the number of hospitalizations due to psychoactive substance use was higher. The average number of hospitalizations due to alcohol use among FE, at the ages mentioned, was 159.5, while for psychotropic drugs it was 145.9. Among MA, the average for the ones aged 30 to 39 was 1,132.3 for alcohol versus 1,102.8 for psychoactive substances, and for the ones aged 40 to 49 it was 1,355.3 for alcohol and 515 for psychoactive substances. In both genders, in the age range of 30 to 39 years for men and 40 to 49 years for women, the higher number of hospitalizations due to alcohol use was observed only until 2020, with a reversal in the three following years. **DISCUSSION:** Mental and behavioral disorders due to substance use encompass conditions of varying severity that alter one's psychophysiological functions. When comparing urgent hospitalizations due to such disorders between different genders and among age groups, there is a predominance of cases in MA in both types of drugs and in all ages, compared to FE. Considering the type of substance, the other psychotropic drugs surpass the number of hospital morbidities compared to alcohol use. Nevertheless, there are exceptions: in FE, alcohol use exceeded hospitalizations due to psychoactive substances only in the 40 to 49 age group, from 2013 to 2020, with an inversion from 2021 onwards. This pattern was also observed in MA, but in the 30 to 39 age group. **CONCLUSION:** It is evident that the inversion regarding the cause of hospitalization among adults took place after the 2020 pandemic and that younger ages (10 to 29 years old) currently predominate in terms of psychoactive substance use. This fact emphasizes the need for policies addressing substance abuse and dependence which must be put into effect among all age groups.

15. **COMPARATIVE ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF TUBERCULOSIS IN HOMELESS INDIVIDUALS IN PIAUÍ, NORTHEAST, AND BRAZIL OVER A DECADE**

Gielson de Sousa Silva¹, Guilherme Moura Lima Portela Santos¹, Angelo Brito Rodrigues¹.

¹ Federal University of Piauí.

INTRODUCTION: Tuberculosis, caused by bacilli from the *Mycobacterium tuberculosis* complex, primarily affects the lower airways and is transmitted through the inhalation of infected aerosols. Factors such as alcoholism, smoking, poor hygiene, inadequate diet, and low immunity increase the risk of infection. The homeless population (HP) is especially vulnerable, yet there are few studies on their clinical-epidemiological profile, justifying this work to improve knowledge and guide primary health measures for this group. **OBJECTIVES:** To analyze the epidemiological profile of tuberculosis in the homeless population in Piauí, comparing it with the profiles in the Northeast and Brazil during the years 2013 to 2022. **METHODS:** An ecological study was conducted through access to the Notifiable Diseases Information System - SINAN. Data were collected on the homeless population in the state of Piauí, the Northeast region, and Brazil infected with tuberculosis from 2013 to 2022, using variables such as age group, sex, color, form of presentation, and closure situation, in addition to calculating cure rates, lethality, and HIV coinfection during the period. **RESULTS:** It was found that males accounted for most cases in the three regions, with 70% of cases in Piauí, 77% in the Northeast, and 81% in Brazil. The brown-colored population was

the most affected, with 68%, 69%, and 45%, respectively, in Piauí, Northeast, and Brazil. Regarding the age group, the 29-39 age range had the most cases across the three regions, with an average of 51% of cases. The most prevalent clinical form was pulmonary, with an average of 92% of cases among the regions. Regarding the average of new HIV cases, it was significantly higher in HP in the three regions, being 21.29 versus 7.32 in the general population in Piauí, 24.5 in HP and 8.93 in non-HP in the Northeast, and 24.9 in HP versus 10.9 in non-HP in Brazil. In terms of cure rates, the average in the observed period was 25 for HP versus an average of 93 cured cases in the general population in Piauí, 30 and 93, respectively, in HP and non-HP in the Northeast, and 34 and 95 in HP and non-HP in Brazil, respectively. The average lethality rate was significantly higher in HP, with an average rate of 7.48 deaths in HP versus 7 deaths in non-HP in Piauí, 7.7 and 6 in the Northeast, respectively, HP and non-HP, and in Brazil, it was 7 against an average rate of 4 deaths, respectively in HP and non-HP. **CONCLUSION:** It is concluded that the homeless population (HP) is highly vulnerable to tuberculosis, showing higher rates of HIV coinfection, elevated lethality rates, and lower cure rates. These data indicate the need to reinforce public health strategies aimed at this population, seeking to improve tuberculosis diagnosis and treatment and to promote further studies on this population.

16. **STIGMA AND EMOTIONAL WELL-BEING IN PATIENTS WITH PARKINSON'S DISEASE: A COMPARATIVE STUDY BETWEEN GENDERS**

Bruna Wendy Capistrano Pinto¹, Caroline Rodrigues Saraiva¹, Marilizze Maria de Sousa Araújo Barbosa¹, Natália Rebeca Alves de Araújo Karpejany², Sandra Tuany Alves de Moraes¹ and Denise Maria Meneses Cury Portela¹.

¹ University Center Uninovafapi-Afya; ²University hospital - Federal University of Piauí.

INTRODUCTION: Parkinson's disease (PD) is a progressive neurodegenerative pathology characterized by motor and non-motor symptoms, which together affect patients' quality of life in multiple aspects, including mental and emotional impairment. **OBJECTIVES:** To assess the perception of emotional well-being (EWD) and stigma (SD) in patients with PD and compare them between genders. **METHODS:** This research is an observational, cross-sectional, descriptive study with a qualitative approach, approved by the Research Ethics Committee under CAAE no.: 30456720.2.0000.5209. We collected data on age, gender, and duration of disease at a movement disorders outpatient clinic in Teresina-PI, where we applied the PDQ-39 version validated for Brazilian Portuguese, and analyzed the obtained data focusing on EWD and SD. Set analysis was achieved through a specific program and its results were presented in absolute value, percentage, and mean \pm standard deviation. **RESULTS AND DISCUSSION:** We interviewed 93 patients, among which 59 (63.4%) were male and 34 (36.5%) were female, predominantly aged between 65 and 74 years (41.9%) and with disease duration mostly between 5 and 10 years (44.1%). Considering EWB and SD of the PDQ-39, without distinction of gender, the means \pm standard deviation presented were 54.2 ± 29.6 and 37.4 ± 33.5 respectively. The closer it is to zero, the better is patient's quality of life in the assessed domain. When evaluated independently, the EWD among women was 67.1 ± 27.6 and the SD was 43.1 ± 34.2 , while for men the scores found were 46.8 ± 28.3 and 34.1 ± 32.9 respectively.

Moreover, the obtained data demonstrate that solely 23.5% of females produced an EWD score below 50, while for males this percentage was 55.9%. For SD, the pattern persists: 17.6% among women and 30.5% among men scored zero. The quality of life of PD patients is affected by numerous factors intrinsic to the pathology itself and its effects on their social life. By applying the EWD we assess subjectively whether the person has felt depressed, isolated, sad or tearful, hurt, anxious and worried about the future, while the SD questions the subject's relationship with society, as well as feelings that they should hide the disease, concern about other people's reactions to them and behaviors such as avoiding eating or drinking in public. In this study, it is evident that these domains are affected, mainly among females and mostly regarding emotional well-being, suggesting that patient's perception of their health is withered. Even though most of them has moderate disease duration, it is already possible to notice mental / emotional impairment, which directly impacts their quality of life. **CONCLUSION:** As shown through this study, it is evident that patients with PD experience significant psychological impairment beyond the visible motor impairments. Moreover, it is demonstrated that there are differences in intensity and presentation of mental and emotional impacts depending on patient's gender.

17. **EPIDEMIOLOGICAL ANALYSIS OF SYPHILIS CASES IN PREGNANT WOMEN THE STATE OF PIAUÍ BETWEEN 2018 AND 2023**

Heloísa Cronemberger Rufino Madeiro¹, Victor José Campelo Vilanova¹, Antonio Levi Farias Borba¹, Maria Eduarda Alencar Franklin², Gabriel Almeida Damasceno Gentil Arruda³, Andrea Cronemberger Rufino⁴.

¹ State University of Piauí; ² Uninovafapi University Center; ³ Federal University of Piauí; ⁴ Faculty Member at the State University of Piauí.

INTRODUCTION: Syphilis is an infection caused by *Treponema pallidum*, usually transmitted through sexual contact. In pregnant women, it is associated with spontaneous abortion, fetal death, early neonatal death, and neonatal sequelae. Prenatal care is essential for identifying cases through serological screening and ensuring appropriate treatment for the pregnant woman and her partners, minimizing associated complications. Understanding the epidemiological profile is crucial for evaluating the most effective prevention and treatment options for this group. **OBJECTIVES:** Conduct an epidemiological study on syphilis in pregnant women in the state of Piauí from 2018 to 2023. **METHODS:** A retrospective and epidemiological study was conducted, with data collected from the Department of Informatics of the Unified Health System (DATASUS). **RESULTS:** A total of 3,682 cases of syphilis in pregnant women were reported in Piauí between 2018 and 2023. Most cases occurred in women aged 20–39 (2,721 / 73.9%), of mixed race (2,625 / 71.3%), and with incomplete primary education (1,003 / 27.2%). Diagnostic test analysis showed a minority with non-reactive treponemal (954 / 25.9%) and non-treponemal tests (449 / 12.2%). **DISCUSSION:** Syphilis in pregnant women is a condition that requires mandatory report due to the risk of vertical transmission. Although it is a preventable disease with accessible and effective treatment, it still has high incidence rates and late diagnosis, highlighting the need for public policies focused on prevention and early diagnosis. Prenatal care during the first trimester is crucial for all pregnant women and should be consistently encouraged by health professionals. The presence of negative diagnostic tests in pregnant women with syphilis suggests possible screening failures and underreporting,

which could lead to adverse outcomes. **CONCLUSION:** There is a need to strengthen screening and treatment programs for syphilis, especially among vulnerable populations, to ensure comprehensive healthcare.

18. **ASSESSMENT OF PERCEPTION OF MOBILITY AND BODY DISCOMFORT IN PD PATIENTS SUBMITTED TO THE PDQ-39 DIMENSIONS.**

Caroline Rodrigues Saraiva¹, Bruna Wendy Capistrano Pinto¹, Eduarda Cardoso e Silva¹, Sandra Tuany Alves de Moraes¹, Natália Rebeca Alves de Araújo² and Denise Maria Meneses Cury Portela¹.

¹ Uninovafapi Afya University Center; ²State University of Piauí.

INTRODUCTION: Parkinson's disease (PD) is a progressive neurodegenerative disease clinically identified according to Parkinsonism criteria. Its symptoms can interfere with the perception of the domains of mobility (MO) and body discomfort (BD), affecting patient's quality of life. **OBJECTIVES:** To assess the profile of MO and BD perception in patients with PD and how it relates to gender, age group and duration of the disease. **METHODS:** This study is observational, descriptive and qualitative. In order to apply the PDQ-39 (Parkinson's Disease Quality of Life Questionnaire) MO and BD domains and to collect the required data, the Research Ethics Committee approved the study under the following CAAE: 30456720.2.0000.5209. Ninety-three patients confirmed with PD participated, and they were monitored at the Movement Disorders Outpatient Clinic in Teresina-PI. The score for each domain varies from 0 to 100, which stands for better or worse perception of quality of life, respectively. The variables collected are: gender, age group and duration of the disease. **RESULTS AND DISCUSSION:** Ninety-three patients participated in the study, 59 men and 34 women. MO among women was perceived as bad, ranging from 82.5 to 100, affecting 22 women out of the total (64.71%), 45.46% of them being between 65 and 74 years old and 40.91% having had the disease for 5 to 10 years. BD holds a higher number of poor scores, ranging from 83.33 to 100, affecting 18 out of the total number of women (52.95%), 66.67% of them being between 65 and 74 years old and 44.45% having had the disease for 5 to 10 years. Regarding MO among men, it was observed that 32 of the total (54.24%) scored poorly, ranging from 80 to 100, 34.38% of them being between 65 and 74 years old and 40.63% having had the disease for 5 to 10 years. About BD, it was assessed that 23 among the men (38.99%) scored poorly, ranging from 83.33 to 100, 34.79% of them being between 75 and 84 years old and 39.14% having had the disease for less than 5 years. Moreover, it was noted that a different set of 23 among the men's group (38.99%) already have moderate scores for BD, ranging from 50 to 75, 39.14% of them being between 55 and 64 years old and 43.48% having had the disease for less than 5 years. The data processed on the female profile reflects a negative perception of MO and BD which affects their quality of life directly, while the male profile reflects a premature poor perception of MO and a later one of BD, as their age progresses. **CONCLUSION:** We concluded that the profiles of MO and BD among women stick to the same age range and duration of the disease, which demonstrates that they are intrinsically related and both affect the perception of their quality of life negatively. By contrast, the BD profile among men denotes an early complaint compared to MO, which is of moderate intensity and worsens as their age progresses, and it subsequently reaches the parameters of MO, which produces a negative perception of their quality of life.

19. **RELATIONSHIP BETWEEN HEART FAILURE MORTALITY RATE AND MUNICIPAL HUMAN DEVELOPMENT INDEX IN PIAUÍ AND BRAZIL, FROM 2012 TO 2021**

LETÍCIA MARIA CALIXTO TORRES NORONHA¹; CARLOS MATHEUS MEIRELES DE OLIVEIRA²; ALDO JOSÉ SILVA DE CASTRO COSTA¹; MARIA VITÓRIA DE SOUSA FERREIRA¹; RAÍ DE MOURA RIBEIRO¹; CARLOS EDUARDO BATISTA DE LIMA³.

¹ DISCENTE DA UNIVERSIDADE FEDERAL DO PIAUÍ; ²DISCENTE DA UNIVERSIDADE ESTADUAL DO PIAUÍ; ³DOCENTE DA UNIVERSIDADE FEDERAL DO PIAUÍ.

INTRODUCTION: Heart failure (HF) is one of the main causes of death related to cardiovascular diseases. In this context, it is important to analyze which parameters may be related to the prognosis of this disease. One of them is the Municipal Human Development Index (MHDI), an indicator that is a methodological adjustment of the Global HDI, and follows three dimensions: income, education, and health. **OBJECTIVES:** To verify the correlation of the mortality rate due to heart failure in Piauí and Brazil with the municipal human development index (MHDI), over a period of 10 years. **METHODOLOGY:** Retrospective ecological study with a quantitative approach, which analyzed data from the Department of Information Technology of the Unified Health System (DATASUS), from 2012 to 2021. The MHDI data for the period studied were obtained from Atlas Brasil. To perform the associations, Pearson's correlation coefficient was used, through the GraphPad Prims program. **RESULTS:** During the period analyzed, the mortality rate due to heart failure showed a negative correlation with the MHDI in Piauí ($r = -0.2969$, $p\text{-value} = 0.4$), and a positive correlation in Brazil ($r = 0.6020$, $p\text{-value} = 0.06$). Despite these results, there was no statistical association between the mortality rate due to HF and the MHDI, since the study presented a significance level of $p\text{-value} > 0.05$. Thus, both measures behave independently, in contrast to what occurs in developed countries, where the HDI has a clear impact on the mortality rate from cardiovascular diseases. **CONCLUSION:** Based on these discussions, it can be concluded that although the HDI-M is a comprehensive indicator that encompasses income, education, and health, it is not necessarily related to mortality from HF. This reveals the uncertainty of the impact of this index on cardiovascular mortality in underdeveloped countries such as Brazil, since it has notable social inequality and an overloaded health network, highlighting the need for integrated and targeted approaches to mitigate the impacts of HF, regardless of the level of human development of a region.

20. **EPIDEMIOLOGICAL PROFILE OF CASES OF REPETITIVE STRAIN INJURY IN BRAZIL BETWEEN 2014 AND 2023.**

Lucas Meneses de Santana e Silva¹, Antonio Levi Farias Borba¹, Victor José Campelo Vilanova¹, Heloísa Cronenberg Rufino Madeiro¹, Maria Eduarda Alencar Franklin², Maria Clara Brito Monteiro³.

¹ State University of Piauí; ² Uninovafapi University Center;

³ Medical Doctor from Unifacid University Center.

INTRODUCTION: Repetitive Strain Injuries (RSI) or Work-Related Musculoskeletal Disorders (WRMD) constitute a group of diseases caused by the repetitive performance of daily tasks in the workplace, which may lead to irreversible sequelae, resulting in disability. These musculoskeletal syndromes significantly impact patients' quality of life and work efficiency. **OBJECTIVES:** Analyze the epidemiological profile of RSI/WRMD in Brazil from 2014 to 2023. **METHODS:** Descriptive epidemiological study based on data from the Department of

Informatics of the Unified Health System (DATASUS), covering RSI/WRMD notifications from 2014 to 2023. The analysis correlates RSI/WRMD diagnoses with variables such as gender, age group, educational level, work hours, and exposure time. **RESULTS:** This study identified 83,103 reported cases of RSI/WRMD in Brazil between 2014 and 2023. Of these, the majority were female (43,106 / 51.9%), aged 40 to 49 years (26,651 / 32.1%), and had completed high school (25,660 / 30.9%). Regarding work circumstances, those with more than 6-hour workdays (54,880 / 66%) and with years of exposure (45,717 / 55.0%) were predominant. **DISCUSSION:** According to the results, RSI/WRMD cases were more prevalent among females, possibly due to the generally lower muscle mass in women compared to men. Additionally, the data reveal a significant prevalence among patients aged 40 to 49 with a high school education who work over six hours daily and have long-term exposure to labor activities. These outcomes are justified by the strain on the musculoskeletal system of these individuals, directly linked to the economic responsibility they bear. This situation not only affects their productive and social lives but also impacts their families and the state. **CONCLUSION:** There is a need for practices and plans for the prevention and early treatment of RSI/WRMD. Additionally, it is essential to clarify how RSI/WRMD affects patients' quality of life.

21. EPIDEMIOLOGICAL PROFILE OF HOSPITAL ADMISSIONS DUE TO CROHN'S DISEASE AND ULCERATIVE COLITIS IN THE STATE OF PIAUÍ BETWEEN 2019 AND 2023.

Victor José Campelo Vilanova¹, Heloísa Cronemberger Rufino Madeiro¹, Antonio Levi Farias Borba¹, João Pedro Magalhães Leite¹, Maria Eduarda Alencar Franklin².

¹ State University of Piauí; ² Uninovafapi University Center.

INTRODUCTION: Crohn's Disease and Ulcerative Colitis are chronic inflammatory diseases of the gastrointestinal tract with an unclear etiopathogenesis. These conditions pose a public health challenge, often leading to frequent hospitalizations, prolonged medication use, and sometimes surgical interventions. Understand the patient profiles associated with these diseases is essential to reduce case numbers, mitigate hospital admissions, and improve mortality rates. **OBJECTIVES:** Assess the epidemiological profile of hospitalizations for Crohn's disease and ulcerative colitis in the state of Piauí from 2019 to 2023. **METHODS:** A retrospective epidemiological study was conducted, with data collected from the Department of Informatics of the Unified Health System (DATASUS). **RESULTS:** During the study period, 578 cases of hospital admissions were reported for patients with Crohn's disease or ulcerative colitis. A predominance of male patients was observed (303/52.4%), with the age group 30-39 years (125/21.6%) and mixed race (344 cases/59.5%). Additionally, there was a mortality rate of 16 cases (2.8%). **DISCUSSION:** Crohn's Disease and Ulcerative Colitis share similar symptoms, such as abdominal pain, diarrhea, and bleeding, which complicate differentiation. However, Crohn's Disease mainly affects the lower small intestine and large intestine, potentially impacting other areas from mouth to anus with segmented lesions. In contrast, ulcerative colitis affects the large intestine and rectum mucosa, with continuous ulcerated lesions. Both conditions can lead to functional loss, impair protein and vitamin retention, and present extra-intestinal manifestations like migratory polyarthritides, uveitis, and skin

lesions. Disease onset often occurs early, between 10 and 30 years, severely affecting patients' quality of life. Additionally, there is a higher incidence of colorectal cancer in ulcerative colitis patients, and a global trend towards increased incidence of inflammatory bowel diseases, associated with industrialization, western lifestyle habits, dietary choices, and smoking. Treatment is complex, involving corticosteroids, mesalazine, antibiotics, and immunosuppressants, depending on disease pattern and clinical activity. However, conventional drugs do not prevent relapses, meaning some patients will require surgical intervention as the disease progresses. **CONCLUSION:** Therefore, there is a need for more research on the pathophysiology and treatment of Crohn's Disease and Ulcerative Colitis to reduce relapses, decrease hospitalization rates, and mitigate mortality.

22. INTERSTITIAL AND RENAL ADVENTITIAL FIBROSIS CAUSED BY VISCERAL LEISHMANIASIS: A HISTOMORPHOMETRIC AND MOLECULAR STUDY

Cauã Luís Silva Ribeiro Cutrim¹, João Vítor Lima Varão¹, Dayse Cristina Fernandes Barros¹, Suylane Sobral de Sousa², Oscar Correia de Fonseca², Bárbara Laurice Araújo Verçosa³.

¹Medical student – Faculdade Pitágoras de Medicina de Codó (FPMC); ²Msc Pharmacology – Universidade Federal do Piauí (UFPI); ³PhD Science – Molecular Biology, Instituto de Ciências Biológicas (ICB) - Universidade Federal de Minas Gerais (UFMG).

INTRODUCTION: Fibrosis is the excessive accumulation of extracellular matrix components, such as collagen, resulting from abnormal tissue repair and leading to the stiffening of organs. It can occur in various organs, such as the heart, lungs, liver, kidneys, skin, and bone marrow. This condition contributes to increased morbidity and mortality rates, impacting quality of life and global public health. In canine visceral leishmaniasis (CVL), intense fibrosis is observed in association with chronic inflammation, and due to fibropoiesis, alterations in the extracellular matrix occur. **OBJECTIVE:** The aim of this study was to characterize and evaluate the expression of renal inflammatory mediators in canine visceral leishmaniasis (CVL). **METHODS:** Kidneys from sixteen dogs infected with *Leishmania* and six uninfected controls were used. Polymerase Chain Reaction (PCR) was performed to detect parasite nucleic acids in the kidney, using a target DNA sequence of *Leishmania donovani*. The kidneys were collected and processed. The slides were stained with Hematoxylin and Eosin (HE), Masson's Trichrome, Picrosirius, and Gomori's Reticulin. The messenger RNAs (mRNAs) of Interleukin (IL) 6, 13, Transforming Growth Factor Beta (TGF- β), Interferon Gamma (IFN- γ)/TGF- β , Tumor Necrosis Factor Alpha (TNF- α)/TGF- β , and IL-12/TGF- β were measured by quantitative Polymerase Chain Reaction (qPCR). All procedures adhered to the guidelines established by the local Institutional Animal Care and Use Committee (CETEA, Federal University of Minas Gerais, protocol no. 198/2007, approved on 03/27/2008). **RESULTS:** The infected dogs exhibited tubular atrophy and dilation, hyaline casts, and thickening of the Bowman's capsule. Symptomatic dogs exhibited diffuse infiltrates, often ranging from moderate to severe, while asymptomatic dogs displayed only mild and localized inflammation. However, the asymptomatic dogs exhibited only mild and localized inflammation. Macrophages were predominant, but lymphocytes were also present in both infected groups. Minimal and focal inflammatory infiltrates were observed in two uninfected control dogs. Fibrosis was directly related to the

presence of clinical signs ($p < 0.05$, chi-square test). More intense intertubular fibrosis occurred in infected dogs ($p > 0.05$, Tukey test). Adventitial fibrosis, morphometrically measured by the average collagen area, was more intense in the symptomatic group than in the asymptomatic group, which showed higher measurements than the control group ($p > 0.05$, Tukey test). The expressions of IL-13 and TGF- β were upregulated in symptomatic dogs and downregulated in asymptomatic dogs compared to uninfected controls. Additionally, TNF- α /TGF- β was upregulated in asymptomatic dogs and downregulated in symptomatic dogs. The expression of IL-6, IFN- γ /TGF- β , and IL-12/TGF- β was upregulated in both infected groups. **CONCLUSION:** These findings underscore the critical role of both pro-inflammatory (e.g., TNF- α , IFN- γ) and anti-inflammatory cytokines (e.g., IL-13, TGF- β) in modulating the severity of renal lesions and fibrosis, thus contributing to disease progression in visceral leishmaniasis.

23. EPIDEMIOLOGICAL STUDY OF HOSPITALIZATIONS FOR ACUTE MYOCARDIAL INFARCTION IN PIAUÍ FROM 2019 TO 2023

Lourdes Manoela Lima Lisboa de Sousa¹, Sharon dos Santos Albuquerque¹, Hanna Bezerra de Moraes¹, Gabriel Chagas Moreira², Silas Freire Pereira e Silva Júnior¹ and Darlyson Emanuel Sena de Freitas¹.

¹ State University of Maranhão; ² Federal University of Ceará

INTRODUCTION: Acute myocardial infarction (AMI), like most cardiovascular diseases, can be easily prevented by eradicating risk factors such as smoking and a sedentary lifestyle. In addition, rapid access to treatment has a significant impact on prognosis. However, it is still the leading cause of death in Brazil and represents a major public health challenge. **OBJECTIVES:** To epidemiologically outline the profile of hospital admissions for AMI in the state of Piauí, from January 2019 to December 2023. **METHODS:** This is a cross-sectional, quantitative and retrospective epidemiological study. Data from the SUS Hospital Information System (SIH - SUS) for the years 2019 to 2023 were used. The variables considered (geographical distribution of hospitalizations, age group, gender, race and number of deaths) were tabulated in Microsoft Excel for analysis and subsequent organization into graphs and tables. **RESULTS:** In total, during the period in question, 9,685 hospital admissions for AMI were recorded in Piauí, of which 674 resulted in death. Of this total, the city of Teresina stands out, with 6,478 hospitalizations (66.88% of the total) and 323 deaths, with a mortality rate of 4.99. In addition, it is worth noting that all the cities in the interior of the state that recorded deaths in hospitalizations due to AMI had higher mortality rates than the capital. In terms of care, the vast majority of cases (9,008 patients) were treated as emergencies. The age group most affected was 60 to 69 years old, accounting for 28.49% of cases. There were also more male patients, with 2,993 more than females. With regard to race, although only 6,299 patients reported this information, there was a predominance of brown people, who accounted for 5,446 patients. In this sense, despite the limitations of the study - subject to coding errors and underreporting - it is clear that it is important to understand the profile of patients hospitalized for AMI in order to target diagnosis, treatment and prevention. Furthermore, it is important to develop public policies aimed at prevention, since many patients discover the disease at stages when treatment is no longer as effective, resulting in high mortality. There is also a contrast in the state's average figures when compared to the capital, which, because it has a more complex hospital infrastructure, provides early and effective care. **CONCLUSION:** AMI is a serious, life-threatening

condition that affects a significant number of people in the state of Piauí, representing a major public health issue. However, it is possible to prevent its occurrence through behavioral and drug interventions. Therefore, understanding the epidemiological profile can help in the development of public policies aimed at the population most at risk, in line with the guiding principle of equity. It is also essential to broaden the debate about AMI in the hospital setting, as its early detection and treatment are fundamental to reducing the number of unfavorable outcomes of this condition.

24. EPIDEMIOLOGICAL ANALYSIS OF HOSPITALIZATIONS DUE TO TRANSPORT ACCIDENTS IN BRAZIL, FROM 2019 TO 2023

Lourdes Manoela Lima Lisboa de Sousa¹, Gabriel Chagas Moreira², Sharon dos Santos Albuquerque¹, Hanna Bezerra de Moraes¹, Silas Freire Pereira e Silva Júnior¹ and Darlyson Emanuel Sena de Freitas¹

¹ State University of Maranhão; ² Federal University of Ceará

INTRODUCTION: Transport accidents (TA), according to the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD10), encompass "any accident involving a vehicle intended, or used at the time of the accident, primarily for the transportation of persons or goods from one place to another". They are a major public health issue worldwide, especially land transport accidents. **OBJECTIVES:** To epidemiologically outline the profile of hospitalizations due to transport accidents in Brazil between 2019 and 2023. **METHODS:** This is a cross-sectional, quantitative, descriptive and retrospective epidemiological study. Data was obtained from the Hospital Information System of the Unified Health System (SIH - SUS), from January 2019 to December 2023. The variables studied (number and regional distribution of hospitalizations, causes, mortality rate, age group, number of cases per year, gender and nature of care) were tabulated in Microsoft Excel for analysis. **RESULTS:** In the period studied, 1,170,281 hospitalizations due to TA were recorded in Brazil, with a greater number of cases in the southeast ($n = 10,390$) and northeast ($n = 6,897$) regions. Among these hospitalizations, the most frequent cause was "ICD 10 - V29: Motorcyclist injured in other and unspecified transport accidents", representing 35.34% of cases ($n = 413,613$). In total, land TAs accounted for 1,034,773 patients, representing 88.42% of all transport accidents. This figure reflects a worldwide pattern, given that land TAs are the most recurrent transport accidents in the world and, according to the World Health Organization, cause around 1.3 million avoidable deaths and 50 million injuries every year. In addition, Brazil had a mortality rate of 2.18, with a total of 25,489 deaths. The most affected age group was 20 to 39 years old, accounting for 48.33% of those injured ($n = 565,599$). There was a significant increase in the number of cases between 2020 and 2022, with a progression from 215,150 hospitalizations due to TA in 2020 to 242,062 hospitalizations in 2022. On the other hand, from 2019 to 2020 and from 2022 to 2023 there was a slight reduction in the number of records ($n = 218,009$ and $n = 237,850$, respectively). As for gender, there was a discrepancy of 648,977 cases between the sexes, with a predominance of male patients (909,629 cases). With regard to care, the vast majority was urgent and emergency care, totaling 903,210 cases. Despite the limitations of this study, such as the possibility of underreporting, there is no denying the high recurrence of transport accidents in Brazil, especially those related to land

transport. **CONCLUSION:** The epidemiological profile of TA hospitalizations in Brazil is of men aged between 20 and 39, who are mainly victims of land accidents. The high recurrence of these accidents underscores the importance of debating transportation safety in order to raise public awareness and reduce the number of cases and fatal outcomes in Brazil.

25. EPIDEMIOLOGICAL ASPECTS OF HOSPITALIZATIONS FOR BONE FRACTURES IN ELDERLY PEOPLE IN PIAUÍ FROM 2019 TO 2023

Yanca Emanuele Carvalho Corrêa¹, Thaynara de Aragão Evangelista¹, Ana Sara Soares¹, Renandro de Carvalho Reis¹.

¹ Uninovafapi University Center.

INTRODUCTION: Given the advances in health systems and increased life expectancy, it is possible to observe a process of demographic transition, characterized by an increase in the elderly population. However, this transition is accompanied by an increase in the number of hospitalizations of elderly people, due to bone fractures resulting mainly from falls, associated with the decline in physical and psychocognitive capacity. This context negatively interferes with the quality of life of these people, and with the public health system, due to the high demand for resources aimed at specialized hospital care for this segment of the social body. **OBJECTIVES:** To analyze the main epidemiological aspects of hospitalizations due to bone fractures in the elderly population in Piauí, from 2019 to 2023. **METHODOLOGY:** This is a cross-sectional, retrospective and quantitative epidemiological study, which addresses the occurrence of hospitalizations of elderly people due to bone fractures in Piauí, from 2019 to 2023, analyzing the variables sex, color/race and municipality of care. Data were collected from the Department of Information Technology of the Unified Health System (DATASUS), specifically from the SUS Hospital Information System (SIH/SUS). **RESULTS AND DISCUSSION:** There were 12,770 hospitalizations due to bone fractures in elderly people between 2019 and 2023 in Piauí. In 2019, 2,444 hospitalizations were recorded, while in 2023, 2,769 hospitalizations were recorded, showing an increase of 13%, which shows that hospitalizations due to bone fractures still have an impact on the population aged 60 and over. Furthermore, 2020 was responsible for the lowest number of hospitalizations, with 2,106 hospitalizations, possibly due to the increase in family assistance during home isolation during the Covid-19 pandemic. There was a predominance of females, with 60%, which can be explained by the feminization of the population aging. In the color/race variable, the brown race had superiority, with 54%, when compared to the black, white, yellow and indigenous races. However, there are no studies that prove the association between skin pigmentation and the risk of bone fractures, but this fact can be justified by the predominance of the brown race in the state. Regarding the municipality of care, Teresina had the highest number, with 8,790 hospitalizations, due to the admission of patients from other municipalities, given that the capital of Piauí is recognized as a reference in health. **CONCLUSION:** It was possible to observe a persistence in the high number of hospitalizations of elderly people due to bone fractures, in the analyzed time interval, associated with the biological changes inherent to the aging process. Therefore, there is a need for educational health actions regarding the prevention of falls in the home environment, in addition to public policies aimed at specializing health care for the elderly, which aim to reduce the prevalence of hospitalizations due to bone fractures in the elderly population.

26. TUBERCULOSIS - FROM ENDEMIC DISEASE TO GLOBAL PUBLIC HEALTH EMERGENCY

Yanca Emanuele Carvalho Anna Beatriz de Quadros Vigano¹, Viviane Kelly Vieira Freire¹, Cíntia Maria de Melo Mendes¹, Naylson Mendes da Silva².

¹ State University of Piauí ² Chagas Rodrigues Regional Hospital.

INTRODUCTION: Tuberculosis (TB) is an airborne disease transmitted via inhalation of aerosols, but it has effective prevention, diagnosis, and treatment methods and can be cured in most cases. However, in 2022, it was the second leading cause of death by a single infectious agent, surpassed only by SARS-CoV-2. Furthermore, around 80,000 people continue to fall ill with TB each year in Brazil. In 2023, tuberculosis caused 1.3 million deaths worldwide, underscoring the need for urgent actions to meet the goal set by the Ministry of Health (MS), in line with the United Nations and the World Health Organization, to eliminate the disease, which has become a health issue not only for Brazil but globally. **OBJECTIVES:** To analyze and present TB mortality data in Brazil, given its notable public health impact, causing a significant number of deaths both nationally and globally. Additionally, to identify methods that may be used to control the disease and reduce mortality. **METHODS:** This is a cross-sectional, retrospective, descriptive study with a quantitative approach. Data were obtained from the Informatics Department of the Unified Health System (DATASUS) and refer to the period between 2020 and 2023. The variables analyzed included confirmed TB cases by race/color, gender, and annual mortality. **RESULTS:** In 2023, 109,345 cases were confirmed, with the brown race being the most affected at 52.27%, and males accounting for 70.6% of cases. Compared to 2020, which had 86,373 confirmed cases, there was a 26.6% increase, with the same groups remaining the most affected. Since 2020, TB cases have gradually increased, even during the 2020, 2021 (91,847 cases), and 2022 (103,994 cases) pandemic years, despite social distancing practices and mask usage, which could help prevent disease spread. Along with the increase in cases, there was also an increase in deaths, peaking in 2022, with 4,499 deaths, a 34.7% increase compared to 2020, which had 3,340 deaths. **CONCLUSION:** Based on the above, it is concluded that there has been a significant increase in both TB cases and deaths. This may be attributed to the reduced availability of Tuberculosis Preventive Treatment (TPT), the primary method for preventing carriers from developing active disease. Therefore, with the increase in TB transmission and mortality, the importance of preventive measures and the necessity for proper treatment adherence, given its high success rate of around 85% in six months, are highlighted, especially as it is an urgent public health issue today that can be addressed.

27. EPIDEMIOLOGICAL PROFILE AND IMPACT OF INFLUENZA VACCINATION IN BRAZIL BETWEEN 2017 AND 2023

Viviane Kelly Vieira Freire¹, Anna Beatriz de Quadros Vigano¹, Cíntia Maria de Melo Mendes¹, Naylson Mendes da Silva².

¹ State University of Piauí ² Chagas Rodrigues Regional Hospital.

INTRODUCTION: Influenza is an acute viral infection affecting the respiratory system, with high transmissibility and the potential to cause mild to severe symptoms, sometimes leading to death. Vaccination has been shown to reduce the annual disease burden and prevent complications. In Brazil, 81,766,016 individuals are targeted by annual vaccination campaigns, aiming to immunize at least 90% of this population. Despite its availability through the Brazilian Unified Health System (SUS), vaccination rates have declined since 2021, remaining below target in 2023. Consequently, influenza still

represents a significant burden on public health, affecting patients' quality of life and contributing to notable morbidity and mortality rates. **OBJECTIVES:** To describe the epidemiological profile of influenza in Brazil, analyzing vaccination coverage data and mortality rates caused by the virus in the country. **METHODS:** This is a cross-sectional, retrospective study with a descriptive and quantitative approach. Data were obtained from the Informatics Department of the Unified Health System (DATASUS) and cover the period from 2017 to 2023. Additionally, operational vaccination reports released by the Ministry of Health were analyzed. The variables analyzed included the number of hospitalizations, number of deaths per year, deaths by age group, deaths by gender, and vaccination coverage percentage in Brazil. **RESULTS:** The study revealed a total of 166,869 hospitalizations in the past seven years (2017 to 2023), with the highest number occurring in 2022, totaling 35,564 hospitalizations. During this period, there were 8,184 deaths, with 2022 also recording the highest death toll, at 1,901 deaths. The highest mortality rate was among individuals over 60 years of age, accounting for 78.9% of the recorded deaths. Additionally, a higher incidence of deaths was observed in males, with 4,271 deaths compared to 3,913 in females. Vaccination coverage in Brazil fell below the target and showed significant reductions. From 2017 to 2019, influenza vaccination campaigns reached an average of 64% of the target population. There was a peak in vaccination coverage in 2020, reaching 90% of the target population, but it declined over the past two years, with less than 70% of the group vaccinated in 2023. **CONCLUSION:** The study highlighted a significant number of hospitalizations and an alarming mortality rate, predominantly among the elderly population (78.8% of deaths). Furthermore, the analysis reveals a correlation between reduced vaccination coverage (below 70% in the last year) and the significant incidence of influenza in the country. Therefore, these numbers underscore the urgency of achieving complete vaccination coverage in the target population across Brazil, aiming to mitigate complications and mortality due to influenza virus infections.

28. HOSPITALIZATIONS FOR LEISHMANIASIS IN THE NORTHEAST REGION OF BRAZIL FROM 2019 TO 2023: EPIDEMIOLOGICAL PROFILE

Franklin Carvalho Kalume¹, Arthur de Alcobaça Castelo Branco Lima Gomes¹, Gustavo de Sousa Gonçalves¹, Júlia Carvalho Alves¹, Lícia Viana Aïremoraïs Carvalho¹ and Klégea Maria Cândia Ramos Cantinho².

¹ Students of the Integral Differential College Unifacid – Idomed; ² Faculty Member of the Integral Differential College Unifacid – Idomed

INTRODUCTION: Leishmaniasis represents a complex of diseases with a broad clinical spectrum and epidemiological diversity and is considered a major public health problem. It is caused by several species of digenetic protozoa of the genus *Leishmania*, which affect humans and many animals. The transmission of the disease occurs mainly through the bite of infected phlebotomines during hematophagy, with non-vector transmission being rare. Considering the forms of host response, the presence of lesions at the site of the vector bite and the clinical evolution, leishmaniasis can be classified as visceral or cutaneous. **OBJECTIVE:** To present the epidemiological profile of leishmaniasis hospitalizations in the Northeast region of Brazil between 2019 and 2023. **METHODS:** This was a descriptive and retrospective epidemiological study of confirmed leishmaniasis hospitalizations in the Northeast region between 2019 and 2023, using data from the Department of Informatics of the Unified Health System (DATASUS). The following variables were analyzed: region,

year, federation unit, CID-10 chapter, gender, color/race, deaths and mortality rate. **RESULTS AND DISCUSSION:** A total of 13,622 hospitalizations for leishmaniasis were reported in Brazil between 2019 and 2023. Among the five Brazilian regions, the Northeast had the highest number of hospitalizations, with 5,773 patients hospitalized (42.38%). In the period analyzed, 2019 was the year with the highest number of reported cases, 1,707 (29.57%), and 2023 had the lowest number, 880 (15.24%). Among the northeastern states, Maranhão stood out with just under a quarter of all hospitalizations in the Northeast, with 1,386 (24.00%), while Paraíba had the lowest number of hospitalizations in this region, with 191 (3.31%). Regarding the forms of the disease, visceral leishmaniasis caused the highest number of hospitalizations, with 3,975 (68.86%), while cutaneous-mucosal leishmaniasis resulted in the lowest number, with 108 cases (1.87%). In terms of gender, there were 3,726 (64.54%) male hospitalizations and 2,047 (35.46%) female. Regarding race, individuals identified as brown were the largest group affected by leishmaniasis hospitalizations in the Northeast, with 3,373 (58.43%). Finally, it is worth noting that 240 deaths were recorded in the Northeast region, with Maranhão having the highest number of victims, 69 (28.75%). Despite this, Rio Grande do Norte had the highest mortality rate in the Northeast (5.76). **CONCLUSION:** In conclusion, most hospitalizations for leishmaniasis in the Northeast region occurred in 2019, predominantly among male, brown individuals living in the state of Maranhão and affected by the visceral form of the disease. It is important to note that the high number of hospitalizations in Maranhão is possibly associated with the presence of areas of the Amazon rainforest within its territory, disorderly urbanization, and deforestation, which have increased contact between humans and disease vectors. Regarding the mortality rate, the prominence of Rio Grande do Norte may be attributed to the lack of quality health services available to the population.

29. CAUSES OF GESTATIONAL AND PUERPERAL MORTALITY IN THE STATE OF PIAUÍ: A COMPARATIVE ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE FROM 2012 TO 2022

Maria Clara Mendes Coimbra¹, Anna Clara Lopes Bonfim Amorim¹, Guilherme Moura Lima Portela Santos¹, Maria Clara Soares Monte¹, Maria Júlia Lima Amorim¹ and Girlene Soares de Figueirêdo¹.

¹ Federal University of Piauí

INTRODUCTION: Maternal and puerperal mortality are essential indicators for measuring the effectiveness and quality of health services offered to women during pregnancy, childbirth, and postpartum. Given the relevance of these indicators for public health in Piauí, it is crucial to evaluate the epidemiological profile in the state, region, and country, identifying areas that require improvements in obstetric care.

OBJECTIVES: To analyze the epidemiological profile of the causes of gestational and puerperal mortality in the state of Piauí, the Northeast, and Brazil from 2012 to 2022. **METHODS:** A cross-sectional observational epidemiological study was conducted using secondary and public databases from the Mortality Information System (SIM), with data referring to notification forms of maternal and puerperal mortality from 2012 to 2022, obtained from DATASUS. The variables analyzed in this study were: ICD-10 category, age group, and period of death. The data were organized and tabulated to perform descriptive statistical analysis. **RESULTS AND DISCUSSION:** The age group most affected by maternal deaths in the three

demographic areas analyzed was 20 to 39 years, corresponding to 79.9% in Brazil, 78.36% in the Northeast, and 79.04% in Piauí. The puerperal period of up to 42 days after delivery had the highest percentage, with 58.69% in Brazil, 54.24% in the Northeast, and 59.61% in Piauí. Regarding ICD-10, in Piauí, the Northeast, and Brazil, ICD O99 (Other maternal diseases classified elsewhere that complicate pregnancy, childbirth, and the puerperium) was the most prevalent, with 20.78% in Brazil, 18.78% in Piauí, and 20.44% in the Northeast. ICD O98 (Maternal infectious and parasitic diseases classifiable elsewhere that complicate pregnancy, childbirth, and the puerperium) represented the second leading cause of maternal mortality in Brazil, accounting for 12.69% of cases. Contrary to the national trend, the Northeast and Piauí reported eclampsia (ICD O15) as the second leading cause, corresponding to 10.65% and 13.76% of cases, respectively. There was a significant increase in the absolute number of cases between 2020 and 2021, with increases of 47.5% in Piauí, 26.59% in the Northeast, and 54% in Brazil. One of the key causes for this increase was the number of deaths due to ICD O98, which saw a dramatic rise of 234.03% in Brazil, 144.76% in the Northeast, and 185.71% in Piauí, reflecting the onset of the COVID-19 pandemic in Brazil. Furthermore, the reduction in the absolute number of cases from 2021 to 2022 is notable across all analyzed areas, attributed to a decline in ICD O98 notifications of 92.96% nationally, 95% in Piauí, and 93.71% in the Northeast. **CONCLUSION:** The higher percentage of maternal mortality in the puerperal period reveals deficiencies in puerperal care and a lack of information for mothers, underscoring the importance of implementing measures for effective monitoring of puerperal women to prevent complications that could lead to death. Additionally, the reduction in rates following the control of the pandemic highlights the need to maintain and enhance preventive measures to improve maternal health.

30. CASES OF CONGENITAL SYPHILIS IN THE STATE OF PIAUÍ: EPIDEMIOLOGICAL PROFILE OVER A DECADE

Marília Beatriz Lima Mineiro¹, Bruna Beatriz Gomes Bonfim Santos¹, Giovanna Maria Araújo Teixeira Luz¹, Camilly Vertunes Alves Paulo¹, Maria Eduarda Alvim Martins Vieira Farias¹ and Lara Bianca Cardoso Pereira¹.

¹ State University of Maranhão (Caxias-MA).

INTRODUCTION: Congenital syphilis (CS) is an infectious-contagious disease caused by *Treponema pallidum*, transmitted through the placenta at any time during pregnancy. This pathology can have various consequences during pregnancy, such as spontaneous abortion, premature birth and clinical manifestations in the newborn. Thus, the importance of the situation presented is noted, in order to direct public assistance policies. **OBJECTIVES:** To outline the epidemiological profile of congenital syphilis cases in the state of Piauí from 2014 to 2023. **METHODS:** This is a descriptive, cross-sectional study using data extracted from the Ministry of Health's TABNET database, through the Notifiable Diseases Information System (SINAN). Inclusion criteria were data from the period 2014 to 2023: year of notification, syphilis, maternal age group and schooling, prenatal care and evolution. The data was collected on June 12, 2024, and stored in Microsoft Excel® for pre-analysis and later schematized in graphs and tables. Data was collected independently by more than one researcher to ensure the quality of the analysis. **RESULTS:** In the period analyzed, 3,271 cases of CS were recorded in the state of Piauí, with the highest number in 2018 with

504 (15.40%) cases, while 2023 had the lowest number, with only 135 (4.12%) confirmed cases. The profile of the mothers of babies with CS was of women aged between 20 and 24 years (29.86%), with schooling from 5th to 8th grade of incomplete primary education (25.80%), who had prenatal care (85.02%), and who were diagnosed with maternal syphilis during prenatal care (46.26%). However, 33.26% of the cases were only confirmed at the time of delivery or curettage and 16.29% were confirmed after delivery, the surplus being cases in which there was no maternal diagnosis. The results showed that 2,843 (86.91%) of the notified babies remained alive, while 80 (2.44%) died from the notified disease. Thus, the significant number of maternal syphilis diagnoses made during or after childbirth may reflect inadequate prenatal care and imply late treatment. As for limitations, there was considerable underreporting, which reflects the inefficiency of epidemiological surveillance in the state and the importance of consistent data to improve control of the disease. **CONCLUSION:** Analysis of the data shows that the occurrence of CS is still significant in the state of Piauí. The maternal profile analyzed corroborates the data in the literature, as well as highlighting the probable limitation of knowledge about measures to prevent Sexually Transmitted Infections. In addition, this research highlights that SINAN provides essential and relevant information, providing essential subsidies for implementing policies aimed at equitable access to maternal and child health care.

31. DISTRIBUTION OF DEATHS FROM THE MAIN NEOPLASMS IN THE HOSPITAL CONTEXT FROM 2014 TO 2023 IN PIAUÍ

Marília Beatriz Lima Mineiro¹, Sharon dos Santos Albuquerque¹, Lourdes Manoela Lima Lisboa de Sousa¹ and Romário de Sousa Oliveira¹.

¹ State University of Maranhão (Caxias-MA).

INTRODUCTION: Cancer is the second leading cause of illness and death in the world. However, incidence and mortality vary significantly between countries, influenced by socioeconomic status. Analyzing deaths from neoplasms provides specific public policies to control the progression of the disease. **OBJECTIVES:** To analyze the distribution of hospital deaths from neoplasms reported in Piauí between 2014 and 2023. **METHODS:** This is an epidemiological, quantitative, descriptive and retrospective study using data from the Hospital Information System (SIH/SUS), made available by DATASUS, referring to notifications of deaths from neoplasms (tumors) from January 2014 to December 2023. The variables used were: federation unit (PI), ICD-10 chapter II, ICD-10 chapter II morbidity tabulation list, deaths, distribution by year, age group and gender. The data was collected on April 5, 2024 and stored in Microsoft Excel® for pre-analysis and subsequent organization into graphs and tables. **RESULTS:** During the period, 6,485 deaths with a diagnosis in Chapter II of ICD-10 (Neoplasms) were recorded in the state of Piauí, representing 0.95% of the national total (n=677,447). The years with the highest and lowest number of deaths in the state were 2015 (n=802) and 2020 (n=492), respectively. There was an average of approximately 648 unfavorable outcomes per year from neoplasms in Piauí. The most prevalent diagnosis in these fatal outcomes was "C33-34 - Malignant neoplasm of the trachea, bronchi and lungs" with 543 (8.37%) of the deaths - in Brazil this percentage is also the most prevalent and amounts to 9.57%. In Piauí, the number of deaths from "C91-95 - Leukemia" came in second place with 512 (7.89%) cases, compared to 3.62% nationally. In third place in the state are deaths from "C50 - Breast neoplasm" with 491 (7.57%) cases and 8.30% in Brazil. The age group most affected in Piauí was 60 to 69 years old, with 1,539 (23.73%) of the deaths and 27.73% nationwide. With

regard to the sex most affected, women showed a slight predominance, but there was a difference of only 239 cases between the two in the state, compared to a slight prevalence of men in the Brazilian context and a difference of 7,805 cases between the sexes. It should be noted that the study has limitations, such as coding errors and underreporting, especially during the years 2020 and 2021 due to the COVID-19 pandemic. There was a predominance of deaths from neoplasms with a longer clinical course, which may explain the greater involvement of age groups from the sixth decade onwards.

CONCLUSION: It can be concluded that the most prevalent records found in the delimitation established in Piauí were deaths from neoplasms of the respiratory tract, hematology and breasts in women aged 60 to 69, highlighting the need to implement public health measures aimed at preventing the development and fatal outcomes of these neoplasms, based on early diagnosis and treatment.

32. INCIDENCE AND MORTALITY OF PENILE CANCER: AN ECOLOGICAL STUDY FOCUSED ON THE NORTHEAST REGION

Erculano de Carvalho Santos filho¹, Luis Felipe Vieira Nunes Porto¹, Kênnio Alves Aguiar¹, Târsis Vinícius Cronemberger de Carvalho Moura Mendes¹, Edson de Castro Ferreira Filho¹, Juliana Soares Severo¹.

¹ Federal University of Piauí.

INTRODUCTION: Penile cancer (PC) is a rare malignancy that affects mainly development countries populations, having a connection with the socioeconomic profile of these places. Among the factors associated with the development of this pathology, hygiene habits, the presence of phimosis and the human papillomavirus (HPV) do stand out. **OBJECTIVES:** To analyze the data about the incidence and mortality of PC in all of the regions of Brazil, as well as to compare these data with the states of the Northeast region. **METHODS:** Ecologic Epidemiological Study, with secondary data collected from the Instituto Nacional do Câncer (INCA) and from DATASUS. The following variables were considered: incidence of cases per residence and mortality per 100,000 inhabitants, taking into account the regions of Brazil and the states of the Northeast region from the period of 2016 to 2022, across all age groups and male individuals. The statistical analysis was done via GraphPad Prism 9.3.0, where ANOVA was performed, followed by Tukey's range test. **RESULTS AND DISCUSSION:** Between the years of 2016 to 2022, there were 5,776 cases of PC in Brazil. The South region was that of the higher incidence (1.14 cases). The Northeast region had the higher mortality (0.56 death). There wasn't a difference in the incidence among the regions; however, the Northeast region had a higher mortality rate (0.566) than the South region (0.432; $p=0.485$) and the Southeast region (0.355; $p=0.0021$). The higher mortality in the Northeast region points to the structural problems of the health system of the region, including inadequate access to the medical care and the treatments. In the states of the Northeast region, there was not a difference in the incidence of PC; however, Maranhão had presented a significant higher mortality (0.775) than Ceará (0.454; $p=0.0295$), Alagoas (0.428; $p=0.072$) and Rio Grande do Norte (0.454; $p=0.0295$), this setting being linked to the precarious socioeconomic condition of this state, given that, according to Atlas Brazil, in 2022, Maranhão had the lowest Human Development Index of the country (0.676). This scenario reflects the lack of knowledge about the PC and the strategies to his prevention, as well as the scarcity of access to treatment. The age group that had the higher incidence was that of 80 years and more in the Northeast region and that of 75 to 79 years in the others regions. The mortality was more prevalent in the

population of 80 years and more in all the regions. The high mortality among the elderly highlights the necessity of health policies directed to this group, aiming to an early diagnosis and effective treatment.

CONCLUSION: The found results of this study revealed significant regional differences in regard of PC mortality in Brazil, being prevalent in places with more precarious socioeconomic conditions and in the age group of 80 years and more. Therefore, it is crucial to invest in the health infrastructure, professionals training and sensitization programs so that PC prevention, early detection and adequate treatment can be achieved in an equally in the regions of Brazil, across all of the age groups, with an emphasis on the Northeast region and the state of Maranhão.

33. TEMPORAL AND EPIDEMIOLOGICAL TRENDS IN DEATHS INVOLVING MOTORCYCLE ACCIDENTS IN PIAUÍ AND THE NORTHEAST IN THE YEARS 2013 TO 2022: CORRELATIONS AND SEASONAL PATTERNS.

Francisco José Diniz dos Santos Júnior¹, Guilherme De Sousa Avelino¹, João Vittor De Sousa Avelino¹, Francisco Cairo Rios Santana², Francisco Lucas Das Chagas Da Rocha Lopes¹ and Marília Santos de Moraes¹.

¹ Federal University of Piauí; ² State University of Piauí

INTRODUCTION: Deaths involving motorcycle accidents represent a significant concern in terms of road safety in Brazil. The high frequency of these accidents, especially in areas such as the State of Piauí and the Brazilian Northeast, reflects not only individual factors, such as driving skills and use of safety equipment, but also infrastructural and climatic conditions specific to the region.

OBJECTIVES: To evaluate the incidence of deaths involving motorcycle accidents in Piauí compared to the Northeast between 2013 and 2022 and estimate the monthly incidence forecast for 2024 to 2034, determine the correlation and percentage variations month to month and seasonal patterns. **METHODS:** The study is a time series analysis that used monthly records and a gender profile involving motorcycle accidents in Piauí and the Northeast of Brazil in the period from 2013 to 2022 from DATASUS - Tabnet, and used the statistical analysis software R. A seasonal ARIMA model for data from 2013 to 2022, generating forecasts for the period from 2024 to 2034. In addition, correlations between the time series for Piauí and the Northeast were calculated and percentage variations were analyzed month by month. **RESULTS:** There was a prevalence of deaths involving males, both in Piauí (89.4% of cases) and in the Northeast (89.7% of cases). For the state of Piauí, forecasts indicate that the number of monthly motorcycle accidents will remain stable at around 665 incidents per month throughout 2024 to 2034. The forecasts are presented with confidence intervals (CI), which range from 596 to 733 (80% CI) and 560 to 769 (95% CI) incidents per month. While for the Northeast region, forecasts indicate a similar pattern of stability, with an average number of monthly accidents predicted to be around 4,489 incidents for the same period. Forecasts range from 4,201 to 4,777 (80%CI) and from 4,049 to 4,771 (95%CI) incidents per month. The correlation found between motorcycle accidents in Piauí and the Northeast between 2013 and 2022 was positive and strong. Specifically, the correlation was approximately 0.87. Analyzing the percentage variations month by month, the largest percentage increases in motorcycle accidents were identified between January and April in Piauí, and between February and March in the Northeast. **CONCLUSION:** The results of the seasonal ARIMA model indicate a constant forecast for the number of motorcycle accidents in Piauí and the Northeast. The strong existing correlation suggests that regional

factors can influence traffic accidents in a similar way in both regions. These results reinforce the need for prevention, inspection and awareness strategies, especially among males, who are the most affected, avoiding possible cases of trauma and deaths. Data interpretation must take into account model limitations and the uncertainty inherent in long time forecasts.

34. ASSESSMENT OF DAILY LIFE ACTIVITY IN PARKINSON'S DISEASE PATIENTS FROM A SPECIALIZED PUBLIC SERVICE IN TERESINA-PI

Marilize Maria de Sousa Araújo Barbosa^[1], Northon Rocha Lima Xavier^[2], Bruna Wendy Capistrano Pinto^[3], Natália Rebeca Alves de Araújo Karpejany^[4], Sandra Tuany Alves de Moraes^[5].

INTRODUCTION: Parkinson's Disease (PD) is a neurodegenerative, chronic, multifactorial and progressive disorder characterized by formation of Lewy bodies and loss of dopaminergic neurons from the base nuclei, particularly the substantia nigra. Its manifestations include motor (bradykinesia, stiffness and resting tremor) and nonmotor alterations (anosmia, fatigue, constipation, sleep disorder and depression) that compromise patients' quality of life.

OBJECTIVES: To assess the perception of daily life activity in Parkinson's Disease patients and how it relates to disease progression. **METHODS:** This study was observational, cross-sectional and quantitative and it was carried out by analyzing data on gender, age group, disease duration and the PDQ-39 validated questionnaire, approved by the Research Ethics Committee under the CAEE: 30456720.2.0000.520. The research covered 93 participants and was conducted by applying the PDQ-39, an instrument that assesses patient's perception on 8 domains ranging from 0 to 100, which represents better and worse quality of life respectively.

RESULTS AND DISCUSSION: Ninety-three patients participated in the study (59 men and 34 women). From PDQ-39, we noticed that, regarding ADL, 62.95 ± 29.24 of the general population, aged 65 to 74 years, produced an average above 50, which results in a worse quality of life. In addition, most of these patients had a disease duration between 5 and 10 years, and 91.4% had mild to moderate disability. When comparing the difference between genders independently, females scored a higher percentage of ADL (64.70 ± 29.16), while males scored 61.94 ± 29.49 . Statistically, ADL was significant in proportion to the duration of the disease.

CONCLUSION: From the data, we were able to conclude that patients with PD between 65 and 74 years old have a worsened perception of their quality of life regarding ADL, and this domain is related to the time of illness. In addition, there is a difference in perception when comparing men and women, with females producing worse scores.

35. INVESTIGATING NON-MELANOMA SKIN CANCER: PROFILE OF TREATMENT IN THE ELDERLY IN PIAUÍ OVER THE LAST 10 YEARS

Angela Gabrielle Santos Sousa¹, Anna Márcia Leal de Sousa¹, Leticia Cavalcante da Costa Aragão¹, Samilla de Melo Oliveira¹, Thaís Resende Ferreira¹, Karina Rodrigues dos Santos¹.

¹ Federal University of the Delta of Parnaíba

INTRODUCTION: Population aging is one of the main factors associated with the high incidence of non-melanoma skin cancer (NMSC) among the elderly. This is the most common malignant neoplasm in Brazil and has high cure rates when diagnosed and treated early. However, the delay in treatment represents a significant morbidity among older people, making it an important public health problem. The organization and systematization of available data on

the time until the start of treatment for NMSC makes a relevant contribution to health care decisions. **OBJECTIVES:** To analyze the main clinical and epidemiological aspects related to the time between diagnosis and treatment of people over 60 diagnosed with NMSC in the state of Piauí between 2014 and 2023. **METHODS:** Retrospective epidemiological study based on secondary data from the Oncology-PANEL, fed by various sources of information from the Unified Health System, of cases diagnosed and that started treatment for NMSC in the elderly over 60 in the years 2014 to 2023 in Piauí. **RESULTS AND DISCUSSION:** A total of 442 cases were found, with the predominant treatment time, from diagnosis to the start of treatment, being up to 30 days ($n=210$; 47.51%), followed by more than 60 days ($n=182$; 41.17%). Between 2014 and 2021, with the exception of 2019, there was a predominance of more than 60 days for treatment. In 2022, 53.70% of cases were treated within 30 days. In 2023, cases prevailed ($n=90$; 20.36%), with 20% of them taking more than 60 days to start treatment. The age group over 80 was the most affected, ($n=157$, 35.52%), with a preponderance of men, ($n=239$; 54%). Cases prevailed in Teresina, ($n=161$; 36.42%), followed by Parnaíba, ($n=46$; 10.41%). The treatment municipalities were restricted to Parnaíba and Teresina, with the latter predominating ($n=391$; 88.46%). While the municipalities of diagnosis were Parnaíba, Picos and Teresina, the latter being the diagnostic hub ($n=386$, 87.33%). The high frequency of cases in the elderly can therefore be seen to be related to risk factors, such as prolonged exposure to the sun, associated with a deficient immune system. A treatment time longer than 60 days is also related to complications of the condition, such as metastases.

CONCLUSION: During the period, Piauí had a high number of cases of NMSC in the elderly, especially those aged 80 and over, requiring an expansion of care for this population. There was a change in the pattern of treatment times, which had previously been more than 60 days, to up to 30 days. However, the scenario of delays in treatment still persists in a considerable percentage, requiring greater agility in health services to carry out these procedures, in order to avoid worsening cases. Teresina is presented as a hub for diagnosis and treatment, requiring improvements to the hospital infrastructure in potential cities, such as Parnaíba, in order to improve the quality and speed of diagnosis and treatment. The study has limitations, such as underreporting, due to flaws in data entry. However, the results highlight the importance of integrated actions to speed up treatment of the disease in the elderly population in Piauí.

36. "EXPERIENCING THE INVISIBLE: A LOOK AT THE ELDERLY POPULATION IN SITUATIONS OF VULNERABILITY": EXPERIENCES OF A UNIVERSITY EXTENSION PROJECT WITH GROUPS OF ELDERLY PEOPLE IN THE MUNICIPALITY OF PARNAÍBA - PI

Angela Gabrielle Santos Sousa¹, Aline Inês Silva Martins¹, Anna Márcia Leal de Sousa¹, Antônio Sávio de Almeida Carvalho¹, Francisco Ricardo Nascimento Freitas¹, Flávio Furtado Farias¹.

¹ Federal University of the Delta of Parnaíba

INTRODUCTION: Ageing has a number of particularities that require a broad and multidisciplinary approach to meet the demands arising from this process. In a context of vulnerability, this phenomenon requires greater attention due to the difficulties in promoting health. Therefore, the existence of projects aimed at highlighting the needs of these elderly people is of the utmost importance. **OBJECTIVES:** To report on the experiences of students from the Federal University of Delta do Parnaíba during a university extension project, to highlight the most relevant findings of the vulnerability experienced by the elderly assisted and to recognize the health care failures present at

the site of the action. **METHODS:** This is an experience report based on the activities carried out by the extension project "Experiencing the Invisible: A look at the elderly population in situations of vulnerability". The project was applied to the elderly and people in the process of ageing on the premises of the São José Shelter, a long-stay institution, and the Pop Center (specialized reference center for homeless people) in the municipality of Parnaíba - PI. The activities were developed in the following formats: anthropometric data assessment, clinical assessment, including blood pressure and blood glucose measurement, lectures, discussion circles and question-and-answer dynamics. The topics were selected based on their epidemiological relevance to the selected age group (≥ 60 years) and spontaneous demands from the groups. The topics covered were: diabetes mellitus, hypertension, violence against the elderly, self-care and social support networks. The activities took place between August 2023 and May 2024. **RESULTS AND DISCUSSION:** By exploring the experience of marginalization and vulnerability that is the scenario of the elderly in the municipality, actions were taken to meet the needs of the target audience. When collecting clinical data, there was a perception of elderly people with high blood pressure, configuring stages of Systemic Arterial Hypertension (SAH), without a previous diagnosis. This scenario was also observed in some cases of high blood glucose levels, but without prior recognition of the disease. In conversations with the participants, their perception of the scenario to which they were exposed was listed, and the negligence experienced, the neglect of care in institutions, scarce access to public health and discouragement of care practices were addressed. The target audience also refused to participate due to different perceptions, such as being healthy and not needing this care, a lack of understanding about the actions and a lack of interest in the context. Thus, there was a need to expand medical care at the sites of the actions, as the public remains in a scenario lacking assertive diagnoses, medication appropriate to the case and comprehensive and continuous care. **CONCLUSION:** It can be concluded that the actions carried out by the project were responsible for beneficial changes in relation to the health and health care of the elderly, changes in terms of acceptance and perception of the importance of the activities carried out by the students and recognition of the precariousness of health promotion experienced in the area.

37. DENGUE EVOLUTION IN PIAUÍ: AN EPIDEMIOLOGICAL OVERVIEW FROM 2020 TO 2024

Vinícius Maciel Bernardo dos Santos¹, Luísa de Sá Carneiro Souza¹, Maria Aparecida de Carvalho Trindade¹, Maria Gabriela de Carvalho Trindade², Renya Kinany de Almeida Batista³, Antonio Ferreira Mendes Sousa¹.

¹ Federal University of Piauí, ²State University of Maranhão, ³University Center Unifacid Wyden.

INTRODUCTION: Dengue is an infectious disease caused by a virus and transmitted through the bite of the *Aedes aegypti* mosquito. The disease presents with signs and symptoms including high fever, severe muscle pain, retro-orbital pain, and red spots on the skin, resulting from the production of pro-inflammatory cytokines. In more severe cases, a reduction in platelet count can lead to bleeding. According to the Pan American Health Organization, the first quarter of 2024 saw a threefold increase in dengue cases across Latin America, with Brazil identified as the most affected, highlighting dengue as a serious public health concern. **OBJECTIVES:** To analyze the epidemiological profile of dengue prevalence in the state of Piauí from 2020 to 2024. **METHODS:** This is a quantitative and descriptive epidemiological study. Data were obtained from the Notifiable

Diseases Information System, Mortality Information System, and Hospital Information System; all accessible through the DataSUS-TabNet platform. The variables used included: sex, age group, race, year of onset of first symptom(s), month of onset of first symptom(s), mortality, hospitalization, Federal Unit and Region. **RESULTS AND DISCUSSION:** Between 2020 and the 23rd epidemiological week of 2024, there were 942,779 probable cases of dengue in the Northeast, with 314,115 cases (33%) occurring only in the first half of 2024. Piauí recorded 56,996 cases throughout this period, with 2022 alone accounting for 31,601 cases (55.4%). In the state, females were the most affected group, as they tend to seek healthcare services more frequently, with 31,824 cases (55.8%). The most affected race was brown, as it constitutes the largest ethnic group in the state, with 37,685 cases (66.1%) in total. The age group 20-39 years showed the highest incidence, with 22,067 cases (38.7%), followed by the 40-59 age group with 12,864 cases (22.5%). The majority of cases resulted in recovery (67.5%) without hospitalization (69.6%). Additionally, dengue-related mortality in Piauí accounted for 0.035% of total deaths in the state, the fourth highest proportion in the Northeast, while hospitalizations due to dengue represented 0.38% of total hospitalizations in the Federative Unit, reaching the highest rate in the Northeast. Regarding the month of the onset of the first symptom(s), the highest prevalence was observed between February and June, totaling 49,519 cases (86.8%). **CONCLUSION:** Thus, the epidemiological profile of dengue in Piauí shows a higher prevalence among: women, individuals of brown ethnicity and those aged 20 to 59 years. Although the majority of affected individuals progressed to recovery without requiring hospitalization, the mortality rate was high, ranking as the fourth highest in the Northeast. Additionally, the dengue hospitalization rate was the highest in the Region. These data indicate a worsening public health situation that imposes costs on the State, which could be mitigated through a greater focus on prevention by intensifying awareness campaigns and strengthening epidemiological surveillance during the months of highest incidence in the federal unit - february to june.

38. EPIDEMIOLOGICAL PANORAMA OF LEPROSY IN PIAUÍ AND TERESINA: AN ANALYSIS FROM 2018 TO 2022

Vinícius Maciel Bernardo dos Santos¹, Luísa de Sá Carneiro Souza¹, Maria Aparecida de Carvalho Trindade¹, Maria Gabriela de Carvalho Trindade², Renya Kinany de Almeida Batista³, Antonio Ferreira Mendes Sousa¹.

¹ Federal University of Piauí, ²State University of Maranhão, ³University Center Unifacid Wyden.

INTRODUCTION: Leprosy is a chronic infectious disease caused by the bacillus *Mycobacterium leprae*. It has a high disabling potential, as, in addition to causing skin lesions, it can progress to neural damage, resulting in sensory and motor impairment. Although it is a curable disease, Brazil has the highest incidence rate in the Americas, with leprosy being endemic in the state of Piauí. Therefore, active case detection and early treatment are essential for controlling leprosy and preventing its complications. **OBJECTIVES:** To analyze the occurrence of leprosy and its epidemiological characteristics in Piauí and its capital, Teresina, from 2018 to 2022. **METHODS:** This is an epidemiological study of a quantitative and descriptive design, analyzing data from the period 2018 to 2022. DataSUS-Tabnet was used to collect information from the Mortality Information System, Hospital Information System, and Notifiable Diseases Information System. The variables analyzed included sex, race, education, age group, reported clinical form, diagnostic operational classification, and disease evolution. **RESULTS:** After analyzing the data, it was

found that from 2018 to 2022, the total number of leprosy diagnoses in Piauí was 4,893. The mortality rate from leprosy and its complications in the federative unit, based on total deaths, reached the second highest rate in the Northeast, at 0.038%. In Teresina, the disease affected 1,521 individuals during this period, showing epidemiological characteristics similar to those in the state, with a concentration in: males (56.2%), people of brown ethnicity (65.4%), people who did not complete secondary education (72%), and age groups 50-59 years (19%) and 40-49 years (18.9%). Furthermore, the most reported clinical form in the capital was dimorphic, with 928 (61%) cases, while the predominant diagnostic operational class was multibacillary, accounting for 1,204 (79.1%) cases. Meanwhile, the treatment abandonment rate was 4.80%, exceeding that of Piauí (4.08%); in contrast, the cure rate was 70.4%, also higher compared to Piauí's rate of 64.8%. Teresina recorded 102 hospitalizations during the same period, representing 50.49% of cases across the state. **CONCLUSION:** Therefore, it was observed that the occurrence of leprosy exhibited similar epidemiological patterns between Piauí and Teresina from 2018 to 2022, with a prevalence among men aged 40-59 years, those with low education levels and individuals of brown ethnicity. Clinically, the dimorphic and multibacillary forms predominated, with the majority of cases progressing to recovery. The data highlighted that Teresina has the highest number of hospitalizations and a greater chance of leprosy recovery in the state, likely due to better infrastructure and urban development. However, the capital also showed a higher rate of treatment abandonment, which is concerning given that Piauí ranks second in the Northeast for mortality from leprosy and its complications. Thus, this reinforces the need for the implementation of public policies focused on continuous treatment and the prevention of leprosy-related complications.

39. CORRELATION BETWEEN BREAST CANCER AND OBESITY IN BRAZILIAN REGIONS FROM 2014 TO 2023: AN ECOLOGICAL STUDY

Luis Felipe Vieira Nunes Porto¹, Kênnio Alves Aguiar¹, Giulia Valente Ribeiro¹, Guilherme Oliveira Gomes¹, Lays Beatrice Lima Matos Costa¹ and Girlene Soares de Figueirêdo¹.

¹ Federal University of Piauí.

INTRODUCTION: According to the Annual Report of the Brazilian National Cancer Institute (INCA), breast cancer is the most common among women in all regions of Brazil, with higher rates in the South and Southeast regions, second only to non-melanoma skin tumors. It is important to highlight that there is a relationship between obesity and breast cancer, as obesity not only increases the risk of estrogen receptor-positive postmenopausal breast cancer but also increases the risk of recurrence and mortality associated with this type of cancer (Bhardwaj et al., 2019). Furthermore, estrogens in breast cancer can result in changes in gene expression that regulate growth, differentiation, apoptosis, and angiogenesis, favoring tumorigenesis (Bhardwaj et al., 2019). **OBJECTIVES:** To analyze the correlation between the incidence of malignant breast neoplasms and obesity in Brazil, at a regional level, from 2014 to 2023. **METHODOLOGY:** Analytical ecological epidemiological study using secondary data on malignant breast neoplasms collected from the DATASUS/TABNET platform and obesity data collected from the Food and Nutritional Surveillance System. The variables analyzed were the incidence, per 100,000 inhabitants, of malignant breast neoplasms in adults (20 to 59 years) and the percentage of the adult population (20 to 59 years) with obesity, both considering the region of residence and the year of service (from 2014 to 2023). The software GraphPad Prism 10.2.3 was used for statistical analysis, consisting of Simple Linear

Regression. **RESULTS AND DISCUSSION:** Obesity and breast cancer in each region showed a statistically significant correlation ($p < 0.05$) for the adult population, as also pointed out by oncological studies demonstrating Body Mass Index (BMI) as a risk factor for breast carcinoma prognosis. The analysis found more substantial values for the Coefficient of Determination (R^2) in the North (89.58%) and Northeast (88.74%) regions, indicating a strong association between obesity rate and breast neoplasia incidence, while the South region (66.18%) showed the weakest relationship between obesity and breast neoplasia. Regarding the slope coefficient (β), which indicates the rate of change in breast cancer for each unit increase in the percentage of obesity, all regions presented a positive coefficient. Among these, the Northeast region stood out with the highest value ($\beta = 1.36$), suggesting a more significant increase in breast cancer among obese individuals in this region, while the Midwest and North regions showed the least pronounced coefficient ($\beta = 0.63$). **CONCLUSION:** Based on the data found in the results, it is clear that obesity is a predisposing factor for the development of breast cancer, indicating a significant correlation between these diseases. Therefore, the importance of public actions in controlling obesity is evident as a measure to reduce the incidence of breast cancer in the different regions of the country.

40. INCIDENCE OF DENGUE IN A NORTHEAST CAPITAL: TIME SERIES ANALYSIS FROM 2013 TO 2023, CORRELATION WITH THE NORTHEAST REGION, AND PROJECTIONS FOR 2024 TO 2036

Guilherme de Sousa Avelino¹, Francisco José Diniz dos Santos Júnior¹, Marcos Wilson Melo Rocha¹, João Vitor de Sousa Avelino¹, Marília Santos de Moraes¹.

¹ Federal University of Piauí.

INTRODUCTION: Dengue is a febrile illness caused by infection with one of the four dengue viruses, primarily transmitted by the *Aedes aegypti* mosquito. Infection can be asymptomatic or exhibit a wide range of clinical manifestations, from mild fever to a life-threatening shock syndrome. **OBJECTIVE:** To assess dengue incidence in Teresina-PI from 2013 to 2023, correlate this data with that from the Brazilian Northeast, and estimate annual incidence projections for 2024 to 2036. **METHODOLOGY:** This is a time series study based on annual dengue records in Teresina-PI and the Northeast of Brazil from 2013 to 2023, sourced from the Notifiable Diseases Information System (DATASUS - Tabwin platform), using R statistical software for analysis. After filtering and annual aggregation, the data were converted into a time series. Simple linear regression was applied to the 2013–2023 data to identify the annual trend in dengue cases. Additionally, correlations were calculated between the time series from Teresina-PI and the Northeast. An ARIMA (AutoRegressive Integrated Moving Average) model was automatically fitted to generate forecasts for 2024 to 2036. **RESULTS:** The incidence of dengue cases (DC) in Teresina-PI increased on average by approximately 603 cases per year, as indicated by simple linear regression from 2013 (2898 DC) to 2023 (5127 DC) [Dengue Cases = $3058.8 + 603.3 \times (\text{Year} - 2013)$]. However, this trend shows significant variability, particularly in 2022 (18013 DC), with a 1032% increase over 2021 (1591 DC). The correlation between dengue cases in Teresina and the Northeast from 2013 to 2023 was positive and moderate, at approximately 0.41. Lastly, a stable projection of 5055 dengue cases annually is forecasted for Teresina-PI from 2024 to 2036. However, confidence intervals (CI) are wide, ranging from -884 to 10994 (80% CI) and -4028 to 14138 (95% CI), indicating high uncertainty in the forecasts, likely due to variability in historical data and the

unpredictable nature of dengue outbreaks. Negative values within the confidence intervals lack practical significance and reflect limitations of the statistical model. **CONCLUSION:** The analysis of dengue cases in Teresina-PI revealed an upward trend over the years, as indicated by the linear regression from 2013 to 2023. The observed moderate correlation suggests that regional factors influence dengue cases similarly in Teresina-PI and the Northeast. The application of the ARIMA model to forecast future cases also suggests a stable estimate for 2024-2036, though wide confidence intervals reflect the associated uncertainty. These results underscore the need for additional approaches to improve forecast accuracy, which is essential for effective planning and response to the ongoing challenge of dengue in Teresina-PI.

41. **in vitro** SUSCEPTIBILITY OF CHROMOBLASTOMYCOSIS AGENTS TO DICLOFENAC SODIUM, BOTH ALONE AND IN COMBINATION WITH THE ANTIFUNGALS AMPHOTERICIN B AND TERBINAFINE

Luana Maria Araujo Silva Furtado¹, Vítor Costa Fernandes¹, João Pedro Ferraz de Sousa¹, Samara Marques de Oliveira¹, Mateus Cardoso do Amaral¹ and Tatiane Caroline Daboit¹.

¹ Federal University of the Parnaíba Delta.

INTRODUCTION: Chromoblastomycosis is a chronic disease caused by human contact with melanized fungi of the order Chaetothyriales, commonly affecting rural workers through inoculation of the fungi into the subcutaneous tissue. The main causative fungi are *Fonsecaea pedrosoi*, *Phialophora verrucosa* and *Cladophialophora carrionii*, which have a rigid, melanized cell wall contributing to their virulence. The treatment of chromoblastomycosis involves various methods, including the use of antifungal drugs, such as amphotericin B, itraconazole (ITZ), posaconazole (PCZ) and terbinafine. However, prolonged use of these drugs can lead to side effects, such as nephrotoxicity or hepatotoxicity. One solution to this issue is drug repositioning. NSAIDs, especially diclofenac sodium, have been explored for their ability to prevent the growth of pathogenic fungi, since they act as inhibitors of cyclooxygenase enzymes, making it impossible to synthesize prostaglandins. Prostaglandins are molecules that aid fungi in forming germ tubes and biofilms. Thus, interrupting the synthesis of these molecules can hinder fungal growth. **OBJECTIVES:** To evaluate, through *in vitro* studies, the susceptibility of chromoblastomycosis agents to diclofenac sodium, both alone and in combination with amphotericin B or terbinafine. **METHODS:** Twenty strains of chromoblastomycosis agents belonging to the fungi collection of the Group for Advanced Studies in Medical Mycology (GEAMICOL) of the Federal University of Delta do Parnaíba (UFDPar) were used. The *Candida krusei* ATCC® 6258 strain was used as a quality control. The susceptibility tests were conducted according to the method proposed in the document M38-A2 of the Clinical and Laboratory Standards Institute-CLSI. The interaction between diclofenac sodium and the antifungals was assessed using a checkerboard assay protocol. The type of interaction between the drugs was obtained using the Fractional Inhibitory Concentration (FIC) index, which was calculated from the MIC values obtained, both alone and in combination. According to the FIC index, interactions were interpreted as synergistic ($FIC \leq 0.5$) or indifferent ($0.5 < FIC < 4$). **RESULTS:** Chromoblastomycosis agents were resistant to diclofenac sodium ($MIC > 256 \mu g/mL$), but the antifungals were effective, terbinafine inhibited at lower concentrations ($0.12-0.5 \mu g/mL$) and amphotericin B at higher concentrations ($2-16 \mu g/mL$). Synergistic interactions were observed with diclofenac sodium and amphotericin B (14 synergisms, FIC index: $0.13-0.5$),

terbinafine/diclofenac sodium combinations also showed synergisms, but to a lesser extent (11 out of 20 isolates, FIC index: $0.24-0.5$). The highest FIC indexes were the samples *Phialophora verrucosa* UFSM (2.00) in the terbinafine x diclofenac sodium combination and *Phialophora verrucosa* ICB (1.50) (amphotericin B x diclofenac sodium). The most indifferent interactions were observed in the terbinafine x diclofenac sodium combination. Antagonism was not observed in the associations evaluated. **CONCLUSION:** The challenges in discovering new antifungal therapies are due to the lack of efficacy of drugs against various mycoses and to the difficulty related to their pharmacokinetic mechanisms and toxicity. The repositioning of existing drugs is a viable and economical alternative. Although diclofenac sodium alone did not show growth inhibition of the tested chromoblastomycosis agents, this study demonstrated that when combined with antifungals such as amphotericin B and terbinafine it showed synergistic effects. These results are promising for clinical studies and for the treatment of chromoblastomycosis.

42. **EPIDEMIOLOGICAL STUDY OF HOSPITALIZATIONS FOR ESSENTIAL HYPERTENSION IN THE STATE OF PIAUÍ FROM 2019- 2023**

Victor Hugo de Sousa Monteiro¹, João Henrique Moraes Pereira da Silva¹, João Victor Ferreira de Sousa¹, Antônio Vilck Sales de Moraes Souza Crisanto¹.

¹Federal University of Piauí.

INTRODUCTION: Essential hypertension, also known as primary hypertension, is a chronic condition in which blood pressure is persistently elevated without an identifiable secondary cause. This condition is diagnosed when systolic blood pressure is equal to or greater than 140 mmHg and/or diastolic blood pressure is equal to or greater than 90 mmHg, in two or more measurements taken on different occasions. In addition, it is one of the main risk factors for cardiovascular diseases, including myocardial infarction and stroke, as well as being associated with chronic kidney failure and damage to other organs. **OBJECTIVES:** The aim of this study was to assess hospitalizations for essential hypertension in Piauí between 2019 and 2023, analyzing the variables of age and gender. **METHODS:** In the following epidemiological study, the data was collected through an active search carried out on DataSUS, so there was no need for approval by an ethics committee. The information was stratified by region of the state of Piauí, from 2019 to 2023. **RESULTS AND DISCUSSION:** In the period analyzed, 5,158 hospitalizations for essential hypertension were recorded. In 2019, there were 1,359 cases (26.35%), which was higher than in other years. Furthermore, cases fell in subsequent years, with the lowest number in 2023 with 812 hospitalizations (15.74%). The most affected age groups were 70-79 years (21.83%) and 60-69 years (20.49%). There were 2,855 female cases (55.35%) and 2,303 male cases (44.65%). In addition, there were 61 deaths, with a mortality rate of 1.18%, and 50% of the deaths were people aged 80 and over. The average length of stay was 2.8 days. Attendance was predominantly urgent (99.61%). **CONCLUSION:** The study showed that the majority of cases were urgent, demonstrating the need for chronic control of arterial hypertension in order to prevent crises, especially in the elderly population (>60 years), who are most affected by crises and their fatal outcome.

43. OVERVIEW OF PROSTATE CANCER DEATHS IN PIAUÍ: A DETAILED EPIDEMIOLOGICAL ANALYSIS (2018-2022)

Marcos Wilson Melo Rocha¹, Francisco José Diniz dos Santos Júnior¹, Francisco Lucas das Chagas da Rocha Lopes¹, Guilherme de Sousa Avelino¹, Lucas Samuel da Silva Araújo¹ and Marília Santos de Moraes¹.

¹ Federal University of Piauí.

INTRODUCTION: Prostate cancer is one of the leading causes of cancer death among men, with adenocarcinoma being the most common type. Risk factors include advanced age, family history, ethnicity, high-fat diet and obesity. Diagnosis is made by rectal examination, PSA and biopsy, with staging by imaging tests. Treatment varies according to the stage of the disease and can include surgery, radiotherapy, hormone therapy, chemotherapy and target therapies. **OBJECTIVE:** To characterize the epidemiological profile of deaths from malignant prostate neoplasia in the state of Piauí between 2018 and 2022, according to DATASUS records. **METHODS:** This is a descriptive, cross-sectional study with a quantitative and qualitative approach, whose objective was to examine the epidemiological data of deaths from prostate cancer in the state of Piauí between 2018 and 2022. The data was obtained from the DATASUS system. Subsequently, a statistical analysis was conducted and the results were organized into tables to facilitate the visualization and interpretation of the information. **RESULTS AND DISCUSSION:** During the period analyzed (2018-2022), 1,257 deaths from malignant prostate neoplasia were reported in the state of Piauí. The highest number of cases was recorded in 2022, with 276 deaths (21.95%), followed by 262 cases (20.84%) in 2021, 258 cases (20.52%) in 2018, 244 cases (19.41%) in 2019 and 217 cases (17.26%) in 2020, demonstrating an upward trend that can be partially explained by a higher incidence of the disease or delays in diagnosis and treatment due to the COVID-19 pandemic that significantly impacted the Brazilian health system in 2020 and 2021. The reduction in the number of deaths in 2020 may be associated with the underreporting that occurred at the height of the pandemic. With regard to race, the majority of cases involved brown patients, totaling 787 deaths, which reflects the racial composition of the state of Piauí, followed by 263 whites, 134 blacks, 3 yellows, 1 indigenous person and 69 cases with unspecified race. However, the disparity in deaths between the different races may also point to inequalities in access to health services, early diagnosis and appropriate treatment. As for age group, the highest proportion of deaths occurred among patients aged over 80, with 562 cases, given that the incidence of prostate cancer increases with age. The 70-79 and 60-69 age groups recorded 456 and 195 deaths, respectively. In the 50 to 59 age group, 39 cases were recorded, while the 40 to 49 and 20 to 29 age groups had 4 and 1 deaths, respectively. **CONCLUSION:** The data shows an upward trend in prostate cancer deaths in Piauí between 2018 and 2022, with higher incidences among brown and elderly men. These findings highlight the urgent need for health policies focused on prevention, early diagnosis and fair access to treatment.

44. EPIDEMIOLOGICAL STUDY OF MALIGNANT NEOPLASMS OF THE LIVER AND INTRAHEPATIC BILE DUCTS IN THE LAST FIVE YEARS IN THE STATE OF PIAUÍ.

Thays Kariny Leal dos Santos¹, Franklin Carvalho Kalume¹, Lícia Viana Aimoraes Carvalho¹, Eduarda Veras Almendra Cavalcante¹, Mariane Ferraz Nunes¹ and Noélia Maria de Sousa Leal².

¹Students of the Integral Differential College Unifacid – Idomed ²Faculty Member of the Integral Differential College Unifacid – Idomed.

INTRODUCTION: Malignant neoplasms of the liver and intrahepatic bile ducts present significant public health challenges as they are among the most common types of cancer. Understanding the epidemiology and prevention of this type of cancer is crucial, as a large portion of hepatocellular carcinomas arises from liver cirrhosis, which can be prevented through reduced alcohol consumption and measures to control hepatitis virus infections. Early identification through blood markers, abdominal ultrasound, and tomography in cases of bile duct cancer aids in staging and reducing future complications. **OBJECTIVE:** To describe the epidemiological profile of hospitalizations due to malignant neoplasms of the liver and intrahepatic bile ducts in the state of Piauí from 2019 to 2023. **METHODOLOGY:** This is a retrospective and quantitative epidemiological study covering the years 2019 to 2023 concerning cases of malignant neoplasms of the liver and intrahepatic bile ducts in the state of Piauí. Information was collected from the Department of Informatics of the Unified Health System (DATASUS). The following variables were analyzed: total hospitalizations, deaths, mortality rate, gender, age group, geographical distribution, and risk factors. **RESULTS AND DISCUSSION:** Between 2019 and 2023, the state of Piauí recorded 1,106 hospitalizations for malignant neoplasms of the liver and intrahepatic bile ducts, with 228 resulting in deaths, leading to a mortality rate of 20.61%. Of the total cases, 70.12% were diagnosed as hepatocellular carcinoma and 29.88% as intrahepatic cholangiocarcinoma. The demographic research revealed a predominance of males (50.40%) with prevalent age groups between 50-59 and 60-69 years. Geographically, the regions of Teresina, Parnaíba, and Picos accounted for 40.32%, 24.76%, and 15.21% of cases, respectively. Among risk factors, 60.45% of patients had a history of liver cirrhosis, with 45.32% attributed to alcoholism and 30.14% to infections with hepatitis B and C viruses. Regarding prevention and diagnosis, 30.24% of cases were identified at early stages, emphasizing the importance of screening programs and early diagnosis. However, 69.76% were diagnosed at advanced stages, highlighting the need for improvements in early detection and access to health services. **CONCLUSION:** The results showed a higher prevalence among male patients aged between 50 and 70 years in Teresina with a history of liver cirrhosis, as well as a mortality rate of 20.61% relative to total hospitalizations. Given these data, a more comprehensive understanding of the challenges faced in managing malignant neoplasms of the liver and intrahepatic bile ducts in Piauí can be achieved, along with identifying opportunities to improve prevention, treatment, and support for affected patients.

45. EPIDEMIOLOGICAL PROFILE OF VIRCHOWIAN LEPROSY WITH CUTANEOUS LESIONS IN THE BRAZILIAN SEMIARID REGION: ANALYSIS OF THE LAST 5 YEARS

Marcus Vinicius Costa dos Santos¹; Emily Leal Alves dos Reis¹; Marina Olimpia Dantas Cruz²; Letícia Brito Pessoa¹ and Antonielly Campinho dos Reis¹.

¹ University Center UNINOVAFAPI

INTRODUCTION: Leprosy is a chronic disease caused by the bacterium *Mycobacterium leprae*, primarily affecting the skin and peripheral nerves. The Virchowian form is one of the most severe clinical manifestations of the disease, characterized by disseminated skin lesions and a deficient immune response to the infection. **OBJECTIVES:** To analyze the epidemiological characteristics of cases of Virchowian leprosy with cutaneous lesions in the Brazilian semiarid region occurring between 2019 and 2023. **METHODS:** This is a cross-sectional, descriptive, retrospective study with a quantitative approach, using data on the semiarid region, year of notification, age group, race, and sex of patients with Virchowian leprosy, collected from the Notification Disease Information System (SINAN) and made available through DATASUS. **RESULTS:** A total of 35,233 cases of cutaneous lesions caused by Virchowian leprosy were recorded in the Brazilian semiarid region from 2019 to 2023, with the highest notification rate in 2019 at approximately 30.4%. The years 2020, 2021, and 2022 had similar rates at 20.18%, 22.62%, and 20.48%, respectively, while the lowest rate was in 2023 at 6.33%. Regarding sex, males had a higher prevalence at 75.48%, while females accounted for approximately 24.52%. The age groups with the highest prevalence were 60-69 years (22.2%), 50-59 years (21.5%), and 40-49 years (approximately 16.7%), together representing 60.4% of the total. In terms of race, the mixed-race population had the highest number of cases, representing 68.26% of the total. **DISCUSSION:** Firstly, the temporal variation in notification rates over the years, with a peak in 2019 followed by a sharp decline in 2023, indicates a possible response to public health interventions implemented during this period. These interventions may have included awareness campaigns, improvements in early detection and treatment, or other preventive measures. Furthermore, the gender disparity in cases of Virchowian leprosy is noteworthy, with significantly higher prevalence among men. This may be attributed to various factors, including different occupational or behavioral exposures, as well as discrepancies in access to healthcare services between genders. Additionally, the age groups most affected by the disease suggest an association with an aging population and possible prolonged exposures over a lifetime. Moreover, the predominance of cases among mixed-race individuals highlights racial/ethnic disparities in health and access to care. These disparities may result from differences in environmental exposure, access to health services, and socioeconomic inequalities. **CONCLUSION:** The results highlight a high incidence of cutaneous lesions due to Virchowian leprosy in the Brazilian semiarid region, with a significant downward trend in notification rates over the analyzed period, possibly due to public health interventions. The predominance of cases among males, the higher incidence among mixed-race individuals, and the more significant impact on older age groups (40 to 69 years) point to socioeconomic disparities and barriers to accessing healthcare services. These findings underscore the ongoing need for epidemiological surveillance and the implementation of targeted strategies to control the disease and reduce health disparities in the region.

46. OVERVIEW OF PROSTATE CANCER IN THE ELDERLY IN PIAUÍ BETWEEN 2019 AND 2023

Anna Márcia Leal de Sousa¹, Alissa Dourado Seabra¹, Eduardo Gustavo de Santana¹, Caroline de Caldas Pereira Bona¹, Kayo Victor Gomes Fontenele¹ and Severino Cavalcante de Sousa Júnior¹.

¹ Federal University of Delta do Parnaíba (UFDPar)

INTRODUCTION: Prostate cancer is the fifth leading cause of death among men worldwide. The risk of this cancer increases with age, affecting more men aged 70 and over. Often, many patients do not take active preventive measures, seeking medical care only after symptoms appear, which usually occurs in the more advanced stages. In Brazil, screening is recommended for men aged 50 to 70 through the prostate-specific antigen test and rectal examination. **OBJECTIVES:** To analyze the epidemiology of prostate cancer among the elderly in the state of Piauí from 2019 to 2023. **METHODS:** This is a retrospective epidemiological study based on secondary data from the Oncology Panel, which was fed by various information sources from the Sistema Único de Saúde (SUS). It includes cases of prostate cancer in elderly patients over 60 years old reported from 2019 to 2023 in Piauí. **RESULTS:** A total of 2,580 cases of malignant prostate neoplasia in the elderly were reported in Piauí between 2019 and 2023. There was a significant variation in the number of cases over these years, with a reduction of 43.11% between 2019 and 2020, followed by an increase of 48.44% between 2020 and 2021. The most frequent age group was 70-74 years (n=587, 25.68%), followed by 65-69 years (n=540, 23.62%), 75-79 years (n=490, 21.43%), 60-64 years (n=357, 15.62%), and over 80 years (n=312, 13.65%). Among the municipalities where diagnoses were made, only two were identified: Teresina (n=2,070, 90.55%) and Parnaíba (n=216, 9.45%). Regarding the therapeutic modality, chemotherapy (n=1,306, 57.13%) was the most frequently used. In terms of staging, 24.23% of cases were stage 4, followed by stage 3 (21.83%), while 36.13% of cases were unspecified. **CONCLUSION:** The significant variations in cases of malignant prostate neoplasia among the elderly in Piauí between 2019 and 2020, followed by an increase between 2020 and 2021, indicate a relationship with changes in screening patterns and the influence of COVID-19. Regarding age groups, it is essential to emphasize the need for health policies focused on specific age groups to improve screening. In the geographical analysis, the centralization of health services in the capital and limited access in other areas of the state were evident. The stages of diagnosed cases showed a predominance of advanced stages. Furthermore, 36.13% of cases did not have specified staging, indicating the need to improve diagnostic accuracy and therapeutic planning. In conclusion, this study highlights the importance of enhancing screening and early diagnosis strategies, decentralizing specialized services, and improving clinical documentation. These actions are essential for more effective management of prostate cancer in the elderly in Piauí, promoting a more equitable and efficient approach to combating this disease.

47. TRACKING TUBERCULOSIS IN THE ELDERLY IN PIAUÍ, BRAZIL: AN EPIDEMIOLOGICAL STUDY

Anna Márcia Leal de Sousa¹, Alan Lopes de Sousa¹, Samilla de Melo Oliveira¹, Marcela Bocarro Oliveira Gomes¹, Diogenes Silva Lages¹ and Severino Cavalcante de Sousa Júnior¹.

¹ Federal University of Delta do Parnaíba.

INTRODUCTION: Tuberculosis (TB) is an infectious and contagious disease that primarily affects underdeveloped countries and remains

a public health problem in Brazil. Despite the effectiveness of treatment, mortality from the disease remains high. For this reason, patient-centered investigation and prevention strategies are essential, as is epidemiological analysis of the local population. **OBJECTIVES:** To analyze the epidemiological profile of tuberculosis in the state of Piauí among the elderly from 2019 to 2023. **METHODS:** This is a retrospective epidemiological study based on secondary data from the Sistema de Informações de Agravos de Notificação (SINAN) of the Departamento de Informação e Informática do Sistema Único de Saúde (DATASUS) concerning tuberculosis cases in elderly individuals over 60 years of age reported from 2019 to 2023. **RESULTS:** During the analyzed period, 1,098 cases of tuberculosis in the elderly were reported, with 179 cases occurring in 2019, 174 in 2020, 228 in 2021, 229 in 2022, and 288 in 2023. There were annual variations, including an increase of 31.0% between 2020 and 2021 and 25.8% between 2022 and 2023. Of the cases, 64.5% (n=708) were men; the most frequent age group was 60-69 years (n=532, 48.5%), followed by 70-79 years (n=392, 35.7%) and those over 80 years (n=174, 15.8%). Among the 172 municipalities with notifications in Piauí, Teresina had the highest number of cases at 35.6% (n=386), followed by Parnaíba (n=62, 5.6%) and Picos (n=28, 2.6%). The pulmonary form of TB (n=926, 84.3%) predominated, followed by the extrapulmonary form (n=143, 13.0%) and the mixed form (n=29, 2.6%). Extrapulmonary cases primarily affected the pleura (n=79, 7.2%), peripheral lymph nodes (n=20, 1.8%), and other sites (n=73, 6.6%). Regarding the type of entry, new cases accounted for 84.1% (n=923), followed by 7.6% (n=83) of relapses and 2.9% (n=32) of re-entries after abandonment. Of the total, 37.8% (n=415) of patients underwent Directly Observed Treatment, while 51.8% (n=569) were cured. Treatment abandonment occurred in 3.3% (n=36) of cases, 8.2% (n=90) died of TB, and 0.7% (n=8) were drug-resistant. **CONCLUSION:** During the observed period, tuberculosis remained a significant challenge for the health of the elderly in Piauí, with a notable increase in cases between 2020 and 2023, particularly among men aged 60 to 69, highlighting the need for special attention for this group. The pulmonary form of TB is the most common, and the high rate of new cases indicates persistent active transmission. Although the cure rate is relatively positive, the rates of treatment abandonment, deaths, and drug resistance underscore the urgency for more effective and personalized interventions. The concentration of cases in municipalities such as Teresina, Parnaíba, and Picos suggests the importance of focusing prevention and treatment efforts in these areas. Additionally, the relatively low percentage of Directly Observed Treatment, along with the rates of relapse and re-entry after abandonment, demonstrate the necessity for improvements in treatment and adherence strategies.

48. EPIDEMIOLOGICAL ANALYSIS OF INFANT DEATHS RELATED TO RESPIRATORY TRACT DISEASES IN BRAZIL FROM 2013 TO 2022

Jonsley Moraes Rego da Silva¹, Eliomar de Carvalho Santos Filho¹, Maria Clara Farias de Miranda Feitosa¹, Vitória de Carvalho Ferreira Portela¹, Yolanda Castelo Branco Macedo¹ and Liliane Maria Soares Martis¹.
1 State University of Piauí.

INTRODUCTION: Infant mortality is an important indicator of the living and health conditions of a given population, indicating the risk of a live birth dying before reaching the first year of life. Looking at the Brazilian scenario, there are numerous factors that contribute to the still high number of deaths among children living in the country. Among these contributing factors are diseases of the respiratory

system, which highlights the relevance of the approach raised in this study. **OBJECTIVES:** To analyze the epidemiology of infant deaths from respiratory diseases in Brazil from 2013 to 2022. **METHODS:** This is a descriptive, quantitative cross-sectional study based on secondary data from the Mortality Information System (SIM). The variables analyzed were: detailed age group, month of death and geographic region of occurrence of deaths from respiratory diseases. **RESULTS:** In the context of the decade analyzed, there were 15,560 infant deaths from respiratory diseases in the country. Considering the age group variable, it can be seen that the majority of deaths recorded occurred between the first and sixth month of life, as follows: 21.3% in the first month of life, 15.1% in the second month of life, 11.40% in the third month of life, 9.1% in the fourth month of life, 7.6% in the fifth month of life and 6.3% in the sixth month of life. With regard to the month in which the death was recorded, the information shows a higher incidence in May (12.8%), June (11.3%), April (10.3%), July (9.7%) and March (8.6%). Finally, from the perspective of the region where the deaths occurred, the majority of deaths occurred in the Southeast, which accounted for 33.1%, followed by the Northeast with 29.5% and the North, which recorded 20.5% of cases. In this sense, the predisposition of cases in childhood may be related to the immaturity of the immune system and the low caliber of the airways, which can be depressed due to the seasonal climate, making it difficult to remove viruses and bacteria from the respiratory epithelium and thus favoring the development of significant respiratory dysfunctions. Furthermore, it can be inferred that the results obtained provide an overview of the environmental imbalance that contributes to mortality in the country, given that in the most affected regions there are predominantly scenarios of atmospheric pollution due to industrial development (Southeast) or fires associated with the deforestation of native vegetation (Northeast and North). It is also worth considering the impact of the low vaccination coverage observed in recent years, since immunization through vaccines is the main mechanism for containing serious manifestations of etiological agents linked to some respiratory diseases, such as the influenza virus. **CONCLUSION:** In the timeframe considered, the data shows a higher prevalence of infant deaths from respiratory-related diseases in children aged one month, during the month of May and in the Southeast region of the country, revealing the need for actions to prevent, treat and reduce harm to this population.

49. EPIDEMIOLOGICAL COMPARISON OF CONFIRMED CASES OF HOSPITALIZATION FOR INFLAMMATORY BOWEL DISEASES IN BRAZIL

Lucas Adriel Rosa Bezerra¹; Diuliane Teixeira Pereira¹; Aline Inês Silva Martins¹; Luan Lopes da Silva Almeida¹; Haendel Pontes Veloso¹ and Francisca Nayra do Nascimento Aquino².

¹ Federal University of Delta do Parnaíba; ² Medical doctor from the State University of Piauí – UESP.

INTRODUCTION: Inflammatory Bowel Diseases (IBD) are chronic diseases that affect the intestine with varying intensities and patterns and are directly influenced by genetic and environmental factors. With social development and, above all, the spread of industrialization, there has been a large-scale increase in IBD. **OBJECTIVE:** To compare the epidemiological profile of confirmed and notified cases of Inflammatory Bowel Diseases in Brazil from August 2018 to December 2023. **METHOD:** This is an epidemiological study of a descriptive nature, with a quantitative approach between August 2018 and December 2023, in Brazil, through a survey of data belonging to the Hospital Information System of the Unified Health

System (SIH/SUS), from DATASUS. The following variables were selected: hospitalizations by type of care according to region and gender (male and female) according to region. **RESULTS AND DISCUSSION:** Between 2019 and 2023, a total of 26,729 hospitalizations for Inflammatory Bowel Diseases (IBD) were recorded in Brazil, with 6,181 cases (23.12%) in 2023. The Southeast region alone accounted for 12,286 (46.00%), followed by the Northeast with 6,746 (25.23%), and finally the North with 967 (3.61%). Comparing the type of hospitalization, there was a high number of emergency cases with 20,264 (75.81%) in the five regions of the country and elective cases with 6,465 (24.19%). In the Northeast, the number was 3,886 (14.53%). Females were more affected, with 14,092 (52.72%), while males had 12,637 (47.27%). Inflammatory bowel diseases (IBD) have shown a change in their epidemiological profile. A pattern of growth in the number of cases has been observed. The implementation of new lifestyle habits, westernization and smoking have changed the data and show an increase in their occurrence both globally and nationally. Various studies point to a prevalence of IBD in women, as observed in Brazil (52.72%). One of the reasons for this figure is the greater demand for health services, so cases in men are underreported. It's worth pointing out that ulcerative retrocolitis and Crohn's disease are difficult to diagnose, which is why there are so many emergency cases (75.81%). **CONCLUSION:** In short, Inflammatory Bowel Diseases (IBD) have increased in incidence in Brazil. They present high morbidity and significant costs for the health system. Therefore, more studies are needed to better explain the behavior of these diseases in the country in order to implement appropriate prophylactic measures as a way of avoiding complications in patients already affected.

50. **COMPARATIVE ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF CROHN'S DISEASE AND ULCERATIVE COLITIS IN PIAUÍ AND BRAZIL FROM 2014 TO 2023**

Camilla Athaides Carvalho Cerqueira¹, Gabriel Henrique de Oliveira Lima¹, Petrone Bandeira dos Santos Júnior², Hugo Antunes Macêdo³, Carlos Matheus Meireles de Oliveira⁴ and Carla Maria de Carvalho Leite¹.

¹ Federal University of Piauí, ² Federal University of Delta of Parnaíba, ³ UniFacid Wyden University Center, ⁴ State University of Piauí.

INTRODUCTION: Crohn's disease (CD) and ulcerative colitis (UC) are the main forms of inflammatory bowel diseases (IBD), characterized by chronic immune-mediated inflammation of the intestine, with an idiopathic cause and specific particularities. IBD occurs globally, predominantly affecting young individuals, with frequent recurrences and severe manifestations, making the understanding of its progression essential for the development of public health strategies. **OBJECTIVES:** To comparatively and statistically analyze the epidemiological profile of CD and UC between 2014 and 2023 in Piauí and Brazil. **METHODS:** This is an ecological epidemiological study using hospital morbidity data from DATASUS for the period between 2014 and 2023. The variables—hospitalizations, sex, and mortality—were tabulated in Microsoft Excel and statistically analyzed through linear regression and Pearson correlation tests using GraphPad Prism software, considering values of $p < 0.05$ as significant. **RESULTS:** In Brazil, a statistically significant positive correlation was observed between the number of hospitalizations due to CD and UC during the study period ($p = 0.0013$; $r = 0.8636$). Linear regression analysis suggests an increase of 230 cases/year ($Y = 230.6X - 460542$), with a more pronounced growth in the last four years (2020-2023), during

which the increase was 738 cases/year ($Y = 738.4X - 1487262$). In Piauí, no statistically significant correlation was found ($p = 0.7775$; $r = 0.1028$), and linear regression suggests a slight increase of only 0.6 cases/year. However, notable outliers were observed, with an increase of over 50% in cases from 2014 to 2015 and a similar reduction from 2019 to 2020. Regarding sex, in Piauí, males accounted for 53.39% of hospitalizations, contrary to expected values from epidemiological data, whereas in Brazil, females predominated with 52.84%, aligning with the literature on the higher prevalence of IBD in females. Concerning mortality, the rate in Piauí was 2.73, with regression analysis showing a downward trend over the period ($Y = -0.06683X + 137.9$). However, this rate is still 13.75% higher than the national rate of 2.4, where mortality remained practically constant ($Y = -0.007394X + 17.34$). **CONCLUSION:** Both in Brazil and Piauí, there was a trend of increasing hospitalizations due to CD and UC over the analyzed period, being more significant nationally, especially in the last four years, while in Piauí, the increase was slight. Piauí shows a higher percentage of hospitalized males with IBD, contrary to national trends and the literature. Moreover, although mortality in Piauí has shown a downward trend, it remains higher compared to Brazil, where mortality has remained almost constant.

51. **CORRELATION BETWEEN ATHEROSCLEROSIS AND OBESITY IN THE REGIONS OF BRAZIL IN THE LAST DECADE: AN ANALYTICAL ECOLOGICAL STUDY**

Gabriel Henrique de Oliveira Lima¹, Luís Fernando Martins Rodrigues de Araujo¹, Davi Kauan Soares Leal¹, Lívia Ferreira da Silva¹, Camilla Athaides Carvalho Cerqueira¹ and Wallace Rodrigues de Holanda Miranda¹.

¹ Federal University of Piauí.

INTRODUCTION: Obesity is a major risk factor for atherosclerosis, as excess weight increases LDL and triglyceride levels, promoting the buildup of fat plaques in the arteries. This leads to the hardening of arterial walls and increases the risk of cardiovascular diseases. Therefore, controlling weight and maintaining healthy blood lipid levels are essential measures for the prevention of atherosclerosis.

OBJECTIVES: To analyze the correlation between hospitalizations due to atherosclerosis and obesity in Brazil at the regional level.

METHODS: Analytical ecological epidemiological study using data from the Brazilian Unified Health System (SUS) Hospital Information System and, for obesity cases, the Food and Nutritional Surveillance System. The variables analyzed were: adult hospitalization rate for atherosclerosis per 100,000 inhabitants, percentage of the adult population (aged 20 to 59) with obesity, region of residence, and year of service (from 2014 to 2023). GraphPad Prism 9.3.0 software was used for statistical analysis, consisting of Simple Linear Regression.

RESULTS AND DISCUSSION: The analysis showed that the Northeast ($p = 0.0014$, $R^2 = 0.7410$), Southeast ($p = 0.0017$, $R^2 = 0.7283$), and Midwest ($p = 0.0013$, $R^2 = 0.7451$) regions exhibited a significant correlation ($p < 0.05$) and high R^2 values. The North ($p = 0.1128$, $R^2 = 0.2839$) and South ($R^2 = 0.02445$, $p = 0.6662$) regions did not present statistically significant correlations. Regarding the analysis of slope coefficients (β) in the regions that presented correlation, all were positive, ranging from 0.81 (Northeast) to 1.01 (Southeast). The results reveal a significant positive correlation between obesity and atherosclerosis in the Northeast, Southeast, and Midwest regions of Brazil in the past decade, indicating that the increase in obesity is associated with a rise in hospitalizations for atherosclerosis in these areas. The North and South regions showed no significant correlation, suggesting the influence of other regional factors. **CONCLUSION:** These findings highlight the importance of public health strategies

aimed at preventing and controlling obesity, particularly in regions with significant correlations, to reduce the incidence of atherosclerosis. Additionally, there is a regional disparity in the correlation of the variables, with strong and significant correlations in the Northeast, Southeast, and Midwest, but not in the North and South. This suggests the need for region-specific approaches to policies and interventions, considering the specific factors influencing each region.

52. RECURRENT MOTOR DEFICIT DUE TO INTERNAL CAROTID PSEUDOANEURYSM: A CASE REPORT

Sarah Carolina Borges Mariano¹, Monique Melo Fortaleza¹, Janine Midori Figueiredo Watanabe¹, Yasmin Lorene de Alvarenga Araujo¹, Sabrinna Jales Cunha Brandão² and Tiberio Silva Borges dos Santos².

¹ State University of Piauí; ² Hospital Getúlio Vargas.

INTRODUCTION: Internal carotid pseudoaneurysm is a rare and potentially serious cerebrovascular condition that is difficult to repair surgically depending on the location. When there is a rupture in the arterial wall, it allows blood to escape and accumulate in the surrounding tissues, forming a cavity similar to an aneurysm. This condition can result from trauma, medical procedures, surgeries, or infections. Clinically, presentation varies according to size, location, compression of adjacent structures and tendency to clot formation. Treatment varies according to the characteristics of each case, from expectant management in asymptomatic cases to endovascular procedures. **CASE REPORT:** A 54-year-old male patient from José de Freitas-PI, married, with no comorbidities, presented a sudden episode of paresthesia and paresis on the right side of the body, with deviation of the labial commissure to the left, for a few minutes, in August 2023. Examinations performed at the Hospital de Urgência de Teresina revealed: hypodense intra-axial corticosubcortical lesion in the left frontal region of probable ischemic nature on computed tomography of the skull, intimal dissection "flap" starting shortly after the origin of the left internal carotid artery and signs of occlusion of the left carotid artery with the presence of "kinking" on carotid Doppler ultrasound. The patient stabilized, with improvement in initial symptoms. Diagnosed with ischemic stroke, he was discharged with a prescription for simvastatin and dual antiplatelet therapy (aspirin and clopidogrel) for follow-up by neurology. In February 2024, the patient returned with the same clinical presentation and was transferred to Hospital Getúlio Vargas for investigation. Physical examination revealed complete right-sided hemiparesis, grade IV, with no change in sensitivity, with normal and symmetrical deep reflexes, and cerebellar tests were normal. The cranial nerves were preserved, except for the asymmetry of the face with deviation of the labial fissure to the left. In further investigation, magnetic resonance imaging showed acute ischemic lesions in the capsulonuclear region and in the periphery of the frontal, temporal, and parietal lobes on the left, with hyperintense signal on T1 and T2 in the M1 segment of the left middle cerebral artery, suggesting a thrombus. Doppler ultrasound of the carotid artery showed no signs of occlusion. After stabilization, the patient was discharged for outpatient follow-up, presenting recurrence of the paresis on the right side during this period. A new magnetic resonance angiography of the cervical vessels was ordered, which revealed elongation and tortuosity of the right internal carotid artery and fusiform dilation of the left internal carotid artery, possibly due to atheromatosis. A new admission was requested for cerebral angiography, which identified saccular dilation after the left carotid bulb, suggesting pseudoaneurysm, and occlusion of the left middle cerebral artery, with compensatory flow through

pial collaterals. A conservative approach was chosen due to the difficulty in performing stenting, with the suspension of dual antiplatelet therapy and initiation of rivaroxaban 20 mg, and continued outpatient follow-up. **CONCLUSION:** In the presence of a vascular syndrome of unknown cause, especially characterized by intermittent pyramidal deficit, a thorough investigation is necessary. The choice of cerebral angiography, the gold standard for carotid stenosis, was crucial for diagnosing internal carotid artery pseudoaneurysm, which, despite its rarity, draws attention as a differential diagnosis of repeated motor deficits.

53. ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF DEATHS FROM ACUTE PERICARDITIS IN BRAZIL FROM 2018 TO 2022

Lara Teles Sousa Rocha¹, Davi Brito Castelo Branco¹, Êmilly Araújo Costa Lucena¹, Giulia Beatriz De Sousa Araujo¹, Petrus Matheus Kalleby Trindade De Amorim Aquino¹ and Rodrigo Guimaraes Vieira De Carvalho¹.

¹ Afya Faculty of Medical Sciences of Santa Inês.

INTRODUCTION: Acute pericarditis is one of the most common inflammatory cardiac diseases, making up about 5% of emergency admissions for chest pain. It is characterized by inflammation of the pericardium and includes both infectious and non-infectious causes. Viral pericarditis is among the most common infectious forms, accounting for 80-85% of cases. Although it is generally benign and self-limited, certain high-risk factors can increase the risk of complications and mortality. These criteria encompass fever above 38° C, extensive pericardial effusion with or without signs of tamponade, immunosuppression, and use of oral anticoagulant therapy. **OBJECTIVES:** To conduct an epidemiological analysis of deaths caused by acute pericarditis in Brazil between 2018 and 2022. **METHODS:** This is an epidemiological, retrospective and quantitative study, developed using data from the Mortality Information System (SIM) in Brazil from 2018 to 2022, made available by the Department of Information Technology of the Unified Health System (DATASUS). For the research, category I30 of the International Classification of Diseases (ICD)-10 was used, which specifically focuses on acute pericarditis, along with parameters such as sex, age group, race, education, and territorial region. **RESULTS:** Between 2018 and 2022, a total of 437 deaths from acute pericarditis were reported in Brazil, the year with the highest number of cases was 2019, with 102 deaths. There was a 35% reduction in reported cases in 2020 compared to the previous year, totaling 66 cases, followed by 70 deaths in 2021, and in 2022, there were 100. The highest concentration of deaths occurred in the southeast region of the country (46.86%) and the lowest in the center-west (5.72%). Among the Brazilian states, São Paulo led, with 144 cases, while Amazonas had the lowest with 1 death recorded. Regarding the age group, the predominance occurred between 60-69 years old, with 87 reported cases, with fewer records at earlier ages, with 4 deaths in children under 4 years old. Regarding gender, 62.24% of the cases occurred in males. Furthermore, cases were prevalent among white individuals totaling 202 deaths (46.22%), followed by mixed race individuals with 186 deaths (42.56%). Among the reported cases, 112 individuals were between 4 and 7 years, and the lowest rate was found in individuals with 12 or more, with 29 deaths. **CONCLUSION:** In summary, deaths related to acute pericarditis reveal an epidemiological profile marked by a higher incidence among white men in the 60 to 69 age range, with a predominance of 4 to 7 years of education. The southeast region emerges as the most affected, particularly the state of São Paulo, indicating the need for public policies to prevent and adequately manage this condition. Furthermore, the COVID-19 pandemic may have contributed to a

statistical bias concerning death records in the country, which is noted by the reduction in deaths in the years 2020 and 2021.

54. **CHARACTERIZATION OF FATALITIES FROM CHILDHOOD ABUSE SYNDROME IN BRAZIL BETWEEN 2013 AND 2022**

Lara Teles Sousa Rocha¹, Davi Brito Castelo Branco¹, Êmilly Araújo Costa Lucena¹, Giulia Beatriz De Sousa Araujo¹, Petrus Matheus Kalleby Trindade De Amorim Aquino¹ and Rodrigo Guimaraes Vieira De Carvalho¹.

¹ Afya Faculdade de Ciências Médicas de Santa Inês

INTRODUCTION: Child abuse syndrome is defined as any action or omission by parents or guardians directed at the victim, resulting in physical, sexual, or psychological pain or harm. Data from World Health Organization reveals that one in every two children aged 2 to 17 experiences some form of violence annually. The lack of training to accurately identify cases contributes to underreporting and perpetuates acts of violence. **OBJECTIVES:** To conduct an epidemiological analysis of deaths related to abuse syndrome in Brazil from 2013 to 2022. **METHODS:** This is an epidemiological, retrospective and quantitative study, developed using data from the Mortality Information System (SIM) in Brazil from 2013 to 2022, made available by the Department of Information Technology of the Unified Health System (DATASUS). For the research, the categories of the International Classification of Diseases (ICD)-10 codes T74 and Y07 and the age range between 0 and 19 years of age were used. In addition, parameters such as sex, race and territorial region were also collected. **RESULTS:** From 2013 to 2022, a total 212 deaths resulting from child and adolescent abuse syndromes were reported in Brazil. The year 2022 had the lowest rate of the period, with 12 deaths, showing a 42% reduction compared to 2013, which had 28 cases. The highest incidence occurred in 2014, with 32 deaths. The Southeast region reported the highest number of deaths at 80 (37.74%), followed by the Northeast with 46 (21.70%), Central-West with 36 (16.98%), North with 26 (12.26%), and South with 24 (11.32%) deaths. São Paulo had the highest number of deaths at 28, followed by Minas Gerais with 24 cases. The lowest occurrence was reported in Amapá, Paraíba, and Acre, with 1 reported death each. Regarding age group, cases were predominant among children under 1 year old accounted for 93 (43.87%) notifications. Furthermore, 68 deaths (32.08%) were recorded in the age group between 1 to 4 years, 12 (5.66%) in the age group of 5 to 9 years, 7 (3.30%) in the age group of 10 to 14 years, and 32 (15.09%) in the age group of 15 to 19 years. The majority of deaths occurred in males, representing 52.36% of the records. In addition, 112 deaths (52.83%) occurred in the brown race, 70 (33.02%) in the white race, 13 (6.13%) in the black race, 12 (5.66%) in indigenous people, and 5 (2.36%) had the race not disclosed. **CONCLUSION:** The data indicates a notable decline in child abuse-related deaths among children under 19 in Brazil in recent years. An examination of the data discloses a pattern of mortality characterized by a prevalence of cases occur among children under 1 year old, males, and of mixed race, probably due to the limited resistance of this group, with the occurrence of deaths being higher in the Southeast region of the country. Therefore, it's important to develop public policies and intervention strategies to address child abuse, which allow for the targeting of resources and prevention efforts towards the most vulnerable populations.

55. **EFFECTS OF VITAMIN D ON MARKERS OF GLYCEMIC CONTROL AND RENAL FUNCTION IN A MODEL OF DIABETES INDUCED BY HIGH-FAT DIET AND STREPTOZOTOCIN**

Livia Ferreira da Silva¹, José Fortes Napoleão do Rêgo Neto¹; Thamara Silva Santos¹; Joyce Lopes Macedo¹, Daniel Dias Rufino Arcanjo¹; Maria do Carmo de Carvalho e Martins¹.

¹ State University of Piauí.

INTRODUCTION: Impaired kidney function is a complication of diabetes mellitus. Nutrients and food components have been used as aids in the management of this disease, especially vitamin D. **OBJECTIVES:** To evaluate the effect of vitamin D supplementation, at different doses and times, on glycemic control and renal function markers in an experimental model of diabetes. **METHODS:** 80 male Rattus norvegicus Wistar were used (age 8 to 12 weeks and body weight 180 to 200 g). Diabetes was induced by ad libitum high-fat, normoprotein diet (HFDNP) and intraperitoneal administration of streptozotocin 30 mg/kg after 5 weeks of HFDNP. The animals were randomly assigned to groups treated for 4 weeks (4S; n=7/group) and 8 weeks (8S; n=9/group) respectively: (1) non-diabetic control group (CN-4S and CN-8S), (2) diabetic control group (CD-4S and CD-8S), (3) diabetic group treated with metformin 150 mg/kg (MET-4S and MET-8S); (4) diabetic group treated with vitamin D 0.25 µg/kg/day (VD0.25-4S and VD0.25-8S); (5) diabetic group treated with vitamin D 0.50 µg/kg/day orally (VD0.50-4S and VD0.50-8S). CN and CD animals received vehicle (sunflower oil). Comparisons between the groups were made using analysis of variance (ANOVA) and Tukey's post-test. The research was approved by the Ethics Committee for the Use of Animals (CEUA) (opinion no. 660/2020). **RESULTS:** VD0.25-4S and VD0.25-8S showed significantly lower mean fasting glucose values ($p<0.05$) when compared to the respective CD ($p<0.05$) (CN-4S: 99.29 ± 2.35 ; CD-4S: 513.90 ± 17.98 ; MET-4S: 459.00 ± 9.55 ; VD0.25-4S: 410.60 ± 28.55 ; CN-8S: 82.00 ± 2.56 ; CD-8S: 454.20 ± 19.91 ; MET-8S: 419.10 ± 15.24 ; VD0.25-8S: 383.30 ± 13.14). Only the group that received 0.50 µg/kg/day of vitamin D for 8 weeks showed lower glycated hemoglobin (HbA1c) values ($p<0.05$) than the other groups (CN-8S: 5.99 ± 1.21 ; CD-8S: 8.22 ± 0.66 ; MET-8S: 7.90 ± 0.37 ; VD0.25-8S: 7.58 ± 1.95 ; VD0.50-8S: 5.17 ± 1.95). There were no differences between the groups in terms of relative kidney weight and serum urea and creatinine concentrations. **CONCLUSION:** Vitamin D supplementation for 4 and 8 weeks in experimental diabetes with characteristics similar to those of type 2 diabetes improved glycemic control, as evidenced by a reduction in fasting capillary glycemia and HbA1c. No changes in the parameters evaluated were indicative of kidney damage in either group.

56. **HOSPITALIZATIONS FOR MOOD DISORDERS IN THE NORTHEAST: A DESCRIPTIVE ECOLOGICAL STUDY OF THE PRE- AND POST-PANDEMIC PERIOD**

Livia Ferreira da Silva¹, Laura Martins Soares Cortez¹, Maria Eduarda Lustosa Carvalho², Mateus Lustosa Teixeira¹, Rafael Antonni Lopes Normando¹ and Carla Maria de Carvalho Leite¹.

¹Federal University of Piauí, ²University Center Unifacid Idomed.

INTRODUCTION: Mood disorders or affective disorders are health conditions that significantly affect the emotional and behavioral state of the individuals affected, and can also cause somatic alterations. These disorders can be multi-causal, with biological, psychological and socio-cultural dimensions. **OBJECTIVES:** To analyze hospitalizations for mood disorders in the Northeast four years before and after the start of the COVID-19 pandemic. **METHODS:** This

was a descriptive ecological epidemiological study using data from the SUS Hospital Information System between 2016 and 2023 in the Northeast. The statistical analysis involved calculating prevalence and linear regression using GraphPad Prism software. The variables analyzed were number of hospitalizations, age group, gender, deaths and type of care. **RESULTS:** In the period analyzed, 58,200 hospitalizations for mood disorders were recorded in the Northeast. Between 2016 and 2019 there were 27,072 records (46.51%), an increase of approximately 482 cases per year ($Y = 481.6 \times X - 964860$; $p < 0.05$), while between 2020 and 2023 31,128 (53.48%) individuals were hospitalized, a period in which there was an approximate increase of 684 cases per year ($Y = 684.4 \times X - 1375733$; $p < 0.05$). The increase observed may be related to greater notification of the disease, an increase in the search for professional help and, in the post-pandemic period, stress factors such as social isolation, socio-economic changes and personal losses. In terms of gender, 36,849 (63.31%) patients were female, while 21,351 (36.69%) were male. Mood disorders were prevalent in women throughout the period, and in 2023, the year with the highest number of cases, there were around 11 hospitalizations per 100,000 men and 19 per 100,000 women. This prevalence may be due to a combination of factors such as hormonal changes, psychosocial stressors such as gender-based violence, but it may also reflect a greater demand for help by women. The most affected age group was 40 to 59 years old, with around 16 cases per 10,000 inhabitants, which was prevalent both in the pre-pandemic period and after the pandemic, suggesting a possible relationship with challenges related to socioeconomic stress, the presence of chronic conditions or hormonal changes. There were 316 deaths between 2016 and 2023 with an increase of around 9 deaths per year ($Y = 9.310 \times X - 18761$; $p < 0.05$). Most of the care provided was urgent (85.77%), indicating possible late diagnosis and deficiencies in the management of initial conditions. **CONCLUSION:** There was a significant increase in hospitalizations for affective disorders between 2016 and 2023, which was more pronounced in the post-pandemic period. There was a predominance of hospitalizations in women, in the 40-59 age group and in emergencies. Thus, there is a need to analyze the correlation between significant events such as the COVID-19 pandemic and the increase in demands related to mental health, in order to implement policies capable of reducing the impacts on the affected population.

57. EPIDEMIOLOGICAL ANALYSIS OF OCCUPATIONAL RELATED MENTAL DISORDERS CASES IN THE NORTHEASTERN REGION

Valéria Feitosa Ferreira¹, Pollyana Soares Lustosa², Artur Guilherme Feitosa Ferreira¹, Juliana Macêdo Magalhães

¹ Federal University of Piauí; ² Uninovafapi University Center

INTRODUCTION: Occupational related mental disorders have become frequent among the economically active population, due to the significant impact they have on the health of the workers, and also on the organizational productivity. Factors such as occupational stress, excessive work load, and the lack of social support in the work environment have been identified as key contributors to the development of some conditions, like anxiety, depression and Burnout syndrome. **OBJECTIVES:** To evaluate the epidemiological profile of the individuals affected by occupational related mental disorders in Brazil's Northeastern region, from 2019 to 2023. **METHODS:** Epidemiological, retrospective and quantitative study, using data concerning occupational related mental disorders from the states within the Northeastern region, available on the National Disease Notification System, accessed via DATASUS. It also used

populational data obtained on the 2022 Demographic Census, conducted by the Brazilian Institute of Geography and Statistics. **RESULTS:** 3347 cases of occupational related mental disorders were notified in the Northeastern Region from 2019 to 2023. The general prevalence rate was of 6,12 cases per 100000 habitants. The races that presented a higher prevalence were Asian, with 80,00 cases/100000 hab, and Caucasian, with 5,54 cases/100000 hab. It is understood that the high prevalence in the Asian race is due to the small population contingent of this ethnicity in the Northeast. As for gender, the prevalence is of 4,52 cases/100000 hab on males, and of 7,62 cases/100000 hab on females. This may be related to the fact that women might be more affected by occupational related mental disorders, as well as a greater demand for healthcare services by women. Regarding age groups, the most affected were 35-49 years (49,7% of the total) and 20-34 years (33,01% of the total), which correspond to individuals belonging to the economically active population. As for education, it's observed that the most affected groups were those with a complete higher education (33,04% of the total) and a complete high school education (23,32% of the total), groups with a greater probability of being employed. **CONCLUSION:** The prevalence of occupational related mental disorders is higher among middle-aged Asian women, with better education. The identification of the most vulnerable groups allow the development of prevention and treatment strategies, contributing to the decrease of negative impacts of mental disorders on the life of workers and on society as a whole. Therefore, promoting a healthy work environment and providing adequate psychological support are essential measures to reduce the incidence of these diseases and to improve the welfare of the workers.

58. EVALUATION OF THE MACRO-REGIONAL NOTIFICATION RATE OF OCCUPATIONAL RELATED NOISE INDUCED HEARING LOSS

Valéria Feitosa Ferreira¹, Pedro Henrique Ximenes Ramalho Barros¹, Eric Marcelo Dias da Silva¹, Maria Victória Moraes Pessoa¹, Lavoisier Assunção Martins Medrado¹ and Luciana Almeida Moreira da Paz Oliveira².

¹ Federal University of Piauí; ² University Hospital - Federal University of Piauí

INTRODUCTION: Noise Induced Hearing Loss (NIHL) is a bilateral neurosensorial loss with ramp aspect on the audiometry. It's strongly related to occupational health, especially on jobs which expose the workers to daily and prolonged inadequate sounds to conventional hearing physiological support. The condition is progressive and irreversible. When related to labor, its notification is responsibility of the States and the Municipalities. **OBJECTIVES:** To analyze, comparatively, the rate of labor related NIHL notifications on a macro-regional scale, correlating possible sub-notifications, and to draw the general profile of the individuals affected by occupational related NIHL. **METHODS:** Epidemiological study of quantitative and retrospective nature. The study uses data concerning the 27 Brazilian states, from 2014 to 2023, obtained on the National Disease Notification System, accessed via DATASUS. The variables analyzed were age, race and gender. The mean average of cases and the average rates according to the variables per region in the analyzed period were assessed. There was a lack of data on NIHL in the states of Amapá and Espírito Santo, as well as incomplete data in some states from the North and Midwest regions. Therefore, the average rate was assessed by assigning value=0 to the unavailable data. **RESULTS:** In Brazil, 7,429 cases of labor related NIHL were notified from 2014 to 2023. Among regions, the Southeast presented a larger

average rate of cases, with a mean average of 77,05 cases/year from 2014 to 2023, followed by the Midwest (58,70 cases/year) and the South (50,03 cases/year). The North and Northeast presented rates of 0,49 and 5,09 cases/year, respectively, numbers which are considerably lower. This is possibly related to sub-notification, a recurring issue concerning occupational health, due to local management problems, such as staff turnover in the Reference Occupational Health Center, the lack of knowledge concerning the obligation of notifying and even the fear of reporting the cases. The profile of the workers affected by NIHL consists in male individuals, belonging to the age groups of 50-64 years and 35-49 years, which highlights the relation between prolonged exposition to noise in the work environment and hearing damage. The most affected races were caucasian and brown, although all regions showed a high rate of non-completion in the field corresponding to race (N: 0,17 cases/year, NE: 1,00 cases/year, MW: 7,95 cases/year, SE: 27,90 cases/year, S: 8,33 cases/year). Failure in completion of the notification forms, as well as the lack of data or its incompleteness highlights a qualification problem of public healthcare workers, and the non-recognition of the importance of filling the notification sheets. **CONCLUSION:** The analysis of the data shows a larger relation of Occupational related NIHL with the male population in the economically active workforce, especially in the Southern and Midwestern regions. However, the study acknowledges the sub-notification problem of the remaining Brazilian regions. Hence, it is necessary the incentive of adequate notification of newer cases, for the development of public policies regarding the disease to be effective.

59. EPIDEMIOLOGICAL PROFILE OF SYPHILIS IN PREGNANT WOMEN IN 2023 BY REGION IN BRAZIL

Gabriela Maranhão Sampaio Tajra França dos Santos Rocha¹, Luis Felipe dos Santos de Sousa¹, Maria Clara Araujo Andrade¹, Tainá Ruben de Sá Albuquerque Braga¹, Leonardo Pereira de Sousa¹ and Thais Cristina da Costa Rocha Pereira¹.

¹ Uninovafapi University Center.

INTRODUCTION: Syphilis in pregnant women is a serious public health problem in Brazil, with significant maternal and neonatal consequences. In 2023, DATASUS data revealed the incidence of this infection across different regions of the country. Gestational syphilis can cause severe complications, such as miscarriages and congenital syphilis, highlighting the need for epidemiological surveillance and effective intervention strategies. **OBJECTIVES:** To analyze the epidemiological profile of syphilis cases in pregnant women in 2023 by region in Brazil. **METHODS:** This is a descriptive epidemiological study with a quantitative approach to syphilis cases in pregnant women in 2023 by region in Brazil. Variables of race and age were also used. Data were obtained from the Department of Informatics of the Unified Health System (DATASUS). **RESULTS:** In 2023, 35,741 cases of syphilis in pregnant women were reported in Brazil. The Northern region reported 4,121 (11.5%) cases, the Northeast 7,294 (20.4%), the Southeast 15,915 (44.5%), the Central-West 3,357 (9.4%), and the South 5,054 (14.1%). White race accounted for 10,011 (28%) cases, mixed race for 19,054 (53.3%), Black race for 4,404 (12.3%), Yellow race for 372 (1%), and Indigenous race for 159 (0.4%). The age group 15 to 19 years accounted for 6,994 (19.5%) of notifications, while those aged 20 to 39 years represented 27,724 (77.5%), and pregnant women aged 40 years or older accounted for 738 (2%) of the cases. **CONCLUSION:** Syphilis in pregnant women in Brazil presents a concerning distribution, with the Southeast and Northeast leading in the number of reported cases, while the Central-West reports the fewest cases. The high incidence among those aged 15 to

19 reflects failures in sexual and reproductive health education programs, highlighting the urgent need to improve access to information and health services for this vulnerable age group, aiming to reduce vertical transmission rates and improve maternal and child health outcomes in the country.

60. EPIDEMIOLOGICAL PROFILE OF SCORPION ACCIDENT CASES IN THE STATE OF PIAUÍ: A DECADE ANALYSIS

Ana Luísa Silva Melo¹, Gabriela Medeiros Celestino de Sousa¹, Gláucia Alves Oliveira¹, Luanny Rodrigues Sampaio Ferreira¹, Sofia Rocha Santos¹ and Augusto César Evelin Rodrigues².

¹Students of the Integral Differential College Unifacid – Idomed;

²Faculty Member of the Integral Differential College Unifacid – Idomed.

INTRODUCTION: Scorpions are invertebrates belonging to the arachnid class, found in almost all terrestrial ecosystems. Scorpion accidents are clinical cases of poisoning caused when a scorpion injects its venom through its stinger. Urban expansion alters the habitat of these species, increasing their interaction with the population. **OBJECTIVE:** To analyze the epidemiological profile of scorpion accident cases in the state of Piauí between 2014 and 2023. **METHODOLOGY:** This was a retrospective, quantitative, descriptive epidemiological study concerning scorpion accident cases in the state of Piauí from 2014 to 2023. Data were obtained from the Department of Informatics of the Unified Health System (DATASUS), analyzing the following variables: type of accident, year of accident, sex, month of accident, and age group. Microsoft Excel was used for data organization and tabulation. **RESULTS AND DISCUSSION:** During the analyzed period, 39,056 cases of accidents with venomous animals were reported in the state of Piauí, with 24,576 (62.9%) involving scorpions, representing an average of 2,457.6 cases per year. Regarding reported cases by sex, there was no significant discrepancy, with a higher incidence among males, totaling 13,060 records (53.1%). This higher occurrence among men can be attributed to scorpions' hiding habits in debris and garbage, materials predominantly handled by males. Additionally, concerning age groups, the highest number of notifications occurred among individuals aged 20 to 39 years, with 7,548 records, indicating 30.7% of total cases. This scenario may be explained by this age group representing the economically active population, making them more exposed to attacks by venomous animals such as scorpions. Regarding occurrences, the highest notification was recorded in 2022 with 4,050 cases, representing about 16.5% of total cases. As for monthly notifications, August had the highest number of cases with 2,614 (10.6%), as this month is one of the hottest of the year and favors scorpion reproduction in the analyzed region. Finally, 20,664 cases (about 84.1%) resulted in recovery, demonstrating the effectiveness of available treatments in the region for venomous animal attacks, specifically scorpions. **CONCLUSION:** The results indicate that scorpion accidents stand out among accidents involving venomous animals. Cases were slightly more frequent among males, with the age group of 20 to 39 years being the most affected. The highest number of notifications occurred in August, and most cases resulted in recovery. These data highlight the importance of intensifying surveillance and epidemiological control measures for scorpions to prevent scorpion accidents in the state of Piauí.

61. EPIDEMIOLOGICAL PROFILE OF DEATHS FROM SYSTEMIC LUPUS ERYTHEMATOSUS IN THE NORTHEAST OF BRAZIL BETWEEN 2013 AND 2022

Gabriela Medeiros Celestino de Sousa¹, Gláucia Alves Oliveira¹, Gustavo de Sousa Gonçalves¹, João Pedro Lourival Azedo de Siqueira Silva¹, Luanny Rodrigues Sampaio Ferreira¹ and Klégea Maria Cândio Ramos Cantinho².

¹Students of the Integral Differential College Unifacid – Idomed;

²Faculty Member of the Integral Differential College Unifacid – Idomed

INTRODUCTION: Systemic Lupus Erythematosus (SLE) is a chronic inflammatory autoimmune disease that can affect various systems of the body, including the skin, joints, kidneys, brain, and other organs. Currently, it is estimated that there are over 65,000 people diagnosed with SLE in Brazil. In recent years, there has been a significant increase in the number of deaths related to SLE, highlighting the need for greater attention to this condition. **OBJECTIVE:** To determine the epidemiological profile of deaths from Systemic Lupus Erythematosus in the Brazilian Northeast between 2013 and 2022. **METHODS:** This was a retrospective, quantitative, and descriptive epidemiological study covering the years 2013 to 2022 in the Brazilian Northeast, focusing on deaths from Systemic Lupus Erythematosus. Information was collected from the Department of Informatics of the Unified Health System (DATASUS). The following variables were analyzed: year of death, age group, sex, color/race, and federative unit. The data was organized and tabulated using Microsoft Excel. A linear regression analysis was performed for annual death cases with a 95% confidence interval and $p < 0.05$ considered statistically significant. **RESULTS AND DISCUSSION:** During the analyzed period, there were 2,351 deaths from SLE in the Northeast. The year 2019 recorded the highest number of cases, with 255 deaths (10.8%), while 2015 had the lowest occurrence with 195 deaths (8.3%). Statistical analysis revealed a linear trend in the increase of cases ($Y = 4.0909 * X - 8018.3$; $R = 0.4654$; $p < 0.0001$). Regarding age groups, the most affected group was between 30 and 39 years old, with 542 deaths (23.0%) recorded. Additionally, there was a significant predominance of deaths among females, with 2,082 records (88.6%), compared to 268 deaths (11.4%) among males. This distribution aligns with existing literature that indicates SLE as a condition more prevalent in females, often related to hormonal and genetic factors. In terms of color/race, most deaths occurred among individuals classified as brown, with 1,453 deaths (61.8%), followed by white individuals with 547 deaths (23.3%), and black individuals with 224 deaths (9.5%). This result may be associated with the predominance of the brown population in the region. Concerning federative units, Bahia reported the highest number of deaths with 642 cases (27.3%), while Sergipe had the lowest number with 88 deaths (3.7%). Piauí ranked fifth among Northeast states with 210 deaths (8.9%) during the analyzed period. **CONCLUSION:** The data revealed that the year 2019 recorded the highest number of deaths from SLE in the Brazilian Northeast, with Bahia presenting the largest quantity of occurrences. Furthermore, it was found that females and individuals aged between 30 and 39 years registered the highest numbers of deaths, predominantly among brown individuals. Thus, it becomes imperative to implement comprehensive strategies to assist citizens affected by SLE, emphasizing the importance of early diagnosis and appropriate treatment to improve these individuals' quality of life.

62. EPIDEMIOLOGICAL PROFILE OF DEATHS FROM PARKINSON'S DISEASE IN BRAZIL BETWEEN 2013 AND 2022

Luanny Rodrigues Sampaio Ferreira¹, João Pedro Lourival Azedo de Siqueira Silva¹, Gabriela Medeiros Celestino de Sousa¹, Gláucia Alves Oliveira¹, Gustavo de Sousa Carvalho¹ and Renandro de Carvalho Reis².

¹Students of the Integral Differential College Unifacid – Idomed;

²Faculty Member of the Integral Differential College Unifacid – Idomed.

INTRODUCTION: Parkinson's Disease (PD) is a progressive and degenerative neurological condition that affects the central nervous system, characterized by a gradual decline in motor and cognitive functions. In Brazil, reporting of PD is not mandatory, but it is estimated that 220,000 people live with the disease. In recent years, there has been a considerable increase in the number of deaths due to PD, highlighting the need for greater attention to this condition. **OBJECTIVE:** To outline the epidemiological profile of deaths from Parkinson's Disease in Brazil. **METHODS:** This was a retrospective, quantitative, descriptive epidemiological study covering the years 2013 to 2022 in Brazil, focusing on deaths from Parkinson's Disease. The study was based on data collected from the Department of Informatics of the Unified Health System (DATASUS). The following variables were analyzed: region, age group, sex and color/race. The data was organized and tabulated using Microsoft Excel. A linear regression analysis was performed for the annual death cases with a 95% confidence interval and $p < 0.05$ considered statistically significant. **RESULTS AND DISCUSSION:** Between 2013 and 2022, there were 41,134 deaths from Parkinson's Disease in Brazil. The year 2022 recorded 5,638 deaths (13.71%), the highest number during this period, while 2013 had the lowest, with 3,034 deaths (7.38%). Statistical analysis revealed a linear trend in the increase of cases ($Y = 269.9 * X - 540318$; $R = 0.9605$; $p < 0.0001$). Thus, national mortality from PD has shown increasingly significant numbers. Analyzing Brazilian regions, the Southeast had the highest number of deaths: 20,487 (49.81%), compared to the North region with only 1,442 deaths (3.51%), the lowest rate recorded during this period. The observed disparity between these regions is subject to existing regional differences such as geographic distribution, environmental and socioeconomic factors, diagnostic quality, and record effectiveness. At the same time, a higher number of deaths was observed among individuals aged 60 to 80 years or older (40,177), representing approximately 97.67% of total deaths during this period, indicating that this age group is the most affected by PD-related mortality. Furthermore, there were 22,717 male deaths (55.23%) compared to 18,411 female deaths (44.76%). It is noteworthy that PD is more prevalent in males, therefore, deaths tend to be proportional to this prevalence. Regarding color/race, most deaths occurred in the white population with 30,013 deaths (72.96%), while only 27 deaths (0.07%) were recorded among indigenous populations. This racial distribution suggests contrasts that warrant investigation to adequately characterize individuals more exposed to this condition. **CONCLUSION:** The results confirm a progressive increase in deaths from PD in recent years, with the highest numbers recorded in the Southeast region among patients aged 60 to 80 years or older, predominantly male and white.

63. **HOSPITALIZATIONS FOR MENTAL DISORDERS DUE TO ALCOHOL USE IN BRAZIL FROM 2014 TO 2023: A DESCRIPTIVE ECOLOGICAL STUDY**

Maria Júlia Lima Amorim¹, Pedro Victor dos Reis Monteiro Lima¹, Vitor Expedito Alves Ribeiro¹, Hugo Antunes Macedo², Rebeca Araujo Dias³ and Girlene Soares de Figueiredo¹.

¹ Federal University of Piauí ² University Center Unifacid Idomed

³ Uninovafapi University Center.

INTRODUCTION: Alcohol abuse and dependence are behaviors that have the potential to exacerbate pre-existing psychiatric conditions. Given the relevance of mental disorders due to alcohol use for Brazilian public health, it is essential to monitor trends in this disease in different regions of the country. **OBJECTIVES:** To evaluate the incidence, lethality and average cost per hospitalization of mental disorders due to alcohol use in Brazilian regions from 2014 to 2023. **METHODS:** Descriptive ecological study with data from the Hospital Information System (SIH/SUS) between January 2014 and December 2023. Variables included region, death rate and average cost per hospitalization. The analysis involved simple linear regression and Analysis of Variance (ANOVA) followed by Tukey's post-test in GraphPad Prism 9, with significance set at $p < 0.05$. **RESULTS:** There were 352,525 hospitalizations for mental disorders due to alcohol use in Brazil during the study period, with an incidence of 16.85/100,000 inhabitants. The South region had the highest incidence (46.94/100,000 inhabitants) and the lowest lethality (0.46%). There were significant differences between hospitalization rates in the regions ($p < 0.0001$), as indicated by ANOVA. Despite the high incidence, the low lethality in the South may indicate efficiency in regional health services or faster access to medical care. In addition, a sharper annual reduction in incidence was found in the South (3.08/100,000 inhabitants) compared to the national average (1.01/100,000 inhabitants), according to the linear regression, highlighting differentiated investments in health. There was also a negative correlation between the average value per hospitalization and the death rate in the South ($p = 0.0274$; $r = -0.6894$), revealing that increased investment in health led to a reduction in the death rate over the years analyzed. **CONCLUSION:** The fact that the South is the leading region in hospitalizations for alcohol-related mental disorders, with figures higher than the national average, suggests regional influences, possibly cultural and socio-economic. However, the lower lethality may point to effective health services. The faster drop in incidence in the South can be attributed to more robust health investments over the years, evidenced by the progressive increase in the average cost per hospitalization.

64. **CREATINE SUPPLEMENTATION, GLYCEMIA, AND ANTIOXIDANT ACTIVITY IN AN EXPERIMENTAL DIABETES MODEL**

Tamara Larissa Silva Barbosa¹, Ingrid Ayremoraes Nascimento¹, Eric Marcelo Dias da Silva¹, Erika Lorrainy Nascimento e Silva¹, Joyce Lopes Macedo², Maria do Carmo de Carvalho e Martins³.

¹Medical Students. Federal University of Piauí – UFPI; ²Master in Food and Nutrition - Federal University of Piauí - UFPI. PhD student in Biotechnology by the Northeast Biotechnology Network (RENORBIO); ³PhD in Biological Sciences from the Federal University of Pernambuco. Department of Biophysics and Physiology - Federal University of Piauí - UFPI.

INTRODUCTION: Dietary creatine supplementation is a widespread practice among physical exercise practitioners and athletes as a strategy to improve performance in short-duration, high-power

exercises. Creatine is a natural nutrient of animal origin that serves as an energy source in muscle cells. Furthermore, creatine acts as a stimulant for insulin secretion, affecting carbohydrate metabolism, as well as activating antioxidant enzymes and increasing the elimination of reactive oxygen and nitrogen species. **OBJECTIVE:** To evaluate the effects of creatine supplementation on glycemia and antioxidant activity in an experimental model of diabetes mellitus. **METHODOLOGY:** Twenty-one female *Rattus norvegicus* animals, aged between 8 and 12 weeks and weighing between 180 and 200 g, were used. Diabetes mellitus (DM) was induced in 14 animals by administering 45 mg/kg of streptozotocin dissolved in 10 mM citrate buffer at pH 4.5, intraperitoneally (i.p.). A group of 7 animals was designated as the normal control (NC) and received citrate buffer at the time of induction. After DM confirmation (fasting capillary glucose ≥ 250 mg/dL three days after induction), the animals were randomly distributed into two groups ($n = 7$ per group) and treated for four weeks: diabetic control group (DC) - diabetic, untreated animals; diabetic animals supplemented with 0.675 g/kg/day of creatine (DCr). Comparison between the groups was performed using ANOVA followed by Tukey's post-test. The research project was approved by the Animal Use Ethics Committee of UFPI (742/2022). **RESULTS AND DISCUSSION:** At the end of the four-week experimental period, the creatine-supplemented group showed a significant reduction in fasting capillary glucose compared to untreated diabetic animals (DCr: 475.14 ± 21.30 ; DC: 541.40 ± 23.20 ; NC: 99.70 ± 10.00). Regarding antioxidant activity, the mean content of non-protein sulfhydryl groups (GSHNP) was significantly higher ($p < 0.05$) in the creatine-supplemented diabetic group compared to the untreated diabetic group ($p < 0.05$) (DCr: 114.23 ± 15.70 ; DC: 69.73 ± 17.20 ; NC: 103.70 ± 12.45), with no differences in the activity of catalase and superoxide dismutase enzymes. **CONCLUSION:** Creatine supplementation, at the dose and treatment duration used, reduced fasting glucose and GSHNP concentration in animals with experimental DM, but did not alter the activity of antioxidant enzymes catalase and superoxide dismutase.

65. **EPIDEMIOLOGICAL ANALYSIS OF THE PROFILE AND SPATIAL DISTRIBUTION OF HOSPITALIZATIONS DUE TO INTRACRANIAL TRAUMA IN PIAUÍ, BETWEEN 2012 AND 2023**

Aldo José Silva de Castro Costa¹, Antonio Gabriel Fontes Mendes¹, Ana Carolina Angelim Damasceno¹, Girlene Soares de Figueiredo¹.

¹ Federal University of Piauí.

INTRODUCTION: Intracranial trauma is defined as the one which is caused by hitting, an impact or stoking that leads to perforation of the cranial box, therefore compromising structures of brain and meninges, in addition of the skullcap and the scalp, which, in general, causes brain function deficit. In Brazil, it is associated above all with young and adult portions of the population, chiefly when it is taken into account accidents with automobiles. In that regard, it impacts not only by compromising the ones affected psychosocial functioning (as there can be severe cognitive and/or physical deficits) but also by the spending generated to the healthcare system by the hospitalization, treatment and rehabilitation costs. **OBJECTIVES:** Defining an epidemiological profile for intracranial trauma in the state of Piauí (Brazil) with the hospitalizations for such cause on the time series of 2012 to 2023, by meanings of asserting its compromising profile according to age group, sex and its distribution across the state's health macroregions. **METHODS:** The study was designed as an epidemiological, observational, and ecological analysis of

hospitalizations for Intracranial trauma in the state of Piauí between 2012 and 2023 considering sociodemographical variables (sex and age), spatial distribution across the health regions and macroregions and time distribution along the period. Data were selected and collected according to the morbidity type of the 10th edition the International Classification of Diseases (ICD-10), provided by the Sistema de Informação Hospitalar (SIH/SUS), belonging to the electronic site of the Departamento de Informatica do SUS (DATASUS). They were organized on Microsoft Excel worksheets and calculated their proportion and medium rate of hospitalization. A statistical and descriptive analysis was made and the p-value of the sociodemographical variables was calculated by means of Chi-square test on the OpenEpi platform (p-value < 0.05 = statistical significance). **RESULTS:** During the years of 2012 to 2023 in Piauí, 26,294 hospitalizations for intracranial trauma were registered, with an increase in the number of occurrences along the cited period. The medium hospitalization rate for this morbidity was significantly higher for the male (112.6 hospitalizations/100 thousand inhabitants, CI95% = 107.4-112.67, p-value < 0.0000001) and older than 60 years population (88,1 hospitalizations/100 thousand inhabitants, CI95% = 72.4-100.5, p-value < 0,0000001) — highlighting the senile susceptibility due to the bone weakening and the incoordination typical of such age —, followed by the group of 15-39 years of age (83,6 hospitalizations/100 thousand inhabitants, CI95% = 77.5 – 91.25, p-value < 0,0000001), in which a grand deal derives of car-crashes. Furthermore, there was a predominance of hospitalization numbers in the Entre Rios region (n = 10,120, 38%) and Meio Norte macroregion (44,5%, n = 11,689), given the greater population contingency of such areas. **CONCLUSION:** According to the analysis, it was demonstrated the prevalence of intracranial trauma morbidity among the male and elderly (older than 60) portions of the population of Piauí, with prevalence of cases in the Entre Rios region and Meio Norte macroregion. These data may ground the formulation of health actions that hinder the occurrence of these traumas and promote the medical interest in developing better treatment and care measures for this condition.

66. **COMPARATIVE ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF ACCIDENTS CAUSED BY THE CLASS ARACHNIDA IN PIAUÍ AND BRAZIL (2014-2023)**

Kênio Alves Aguiar¹, Francisco Rafael Gomes Lima¹, Luis Felipe Vieira Nunes Porto¹, Erculano de Carvalho Santos filho¹, Guilherme Oliveira Gomes¹, Gírlene Soares de Figueirêdo¹

¹ Federal University of Piauí.

INTRODUCTION: Accidents involving venomous animals have a significant prevalence in all regions of Brazil, given the diversity of species of spiders, scorpions, and snakes that have venom. Among these accidents, there are those that must be reported through the Notifiable Health Conditions Information System (SINAN), such as those involving arthropods of the class Arachnida, which is composed of both spiders (Phoneutria, Latrodectus, and Loxosceles) and scorpions. **OBJECTIVES:** To describe and analyze the epidemiological profile and incidence of accidents caused by scorpions and spiders in Piauí and Brazil from 2014 to 2023. **METHODS:** Retrospective and descriptive study, with quantitative and comparative analysis of anonymous data collected by SINAN, made available on the website of the Brazilian National Health System Information Technology Department (DATASUS). The Data were extracted according to: year of notification (2014-2023), type of accident (spider and scorpions), sex, deaths, age group and spider genus. Computations of the relative

risks, lethalties and incidences were performed. **RESULTS AND DISCUSSION:** During this period, 1,734,242 cases of accidents with Arachnida occurred in Brazil, with accidents with scorpions were the most recurring in the class (81%), a difference more evidence in Piauí (93.5%). In the incidence by sex, scorpion stings in Piauí and spider bites in Brazil both presented a higher relative risk for males (1.2), while the accidents with spiders in Piauí were the only ones to place males as a possible protective factor (0.95). In regard of the age group, the class Arachnida has a higher incidence in the elderly population, especially in the range of 60 to 69 age group, where only spider bites in Piauí has a larger distribution across the economically active population, suggesting a possible association of the residential space as a risk environment, given that these animals easily adapt to new environments. In regard of accidents caused by spiders, the national incidence (14.95 cases/100,000 inhabitants) is higher than that of Piauí (5.56 cases/100,000 inhabitants). Among the genera of greatest interest in both, cases by Loxosceles prevail; however, Piauí has a large number of ignored cases. Among the accidents, Piauí demonstrated the higher lethality for both spiders (0.24%) and scorpions (0.1%), in comparison with the national values of 0.05% (spider bites) and 0.07% (scorpion stings), which demonstrates a higher susceptibility of the population of Piauí and the need for actions to reverse this scenario. **CONCLUSION:** The accidents caused by scorpions have the higher incidence in Piauí, mainly affecting the elderly and male individuals, unlike spider bites which occur more in females and are more common in the national context. Despite having the lowest incidence in the state, the number of deaths due to spider accidents in Piauí is 4.4 x higher than that of Brazil. Furthermore, Loxosceles is the most common genus in both locations analyzed. Finally, it is important to emphasize the relevance of these data, as well as the need for further studies in this area to better understand the specific circumstances of Piauí, so that more effective preventive and control policies can be created.

67. **IRON DEFICIENCY ANEMIA IN BRAZIL: AN EPIDEMIOLOGICAL ANALYSIS OF HOSPITALIZATIONS FROM 2020 TO 2023**

Ywna Carvalho de Araújo Gorgônio¹, Isadora Veras Araújo Soares¹, Sara Martins Rodrigues¹, Maria Gabryella Pereira Camarço¹, Talya Aguiar de Lima¹, Thiago Soares Gondim Medeiros¹.

¹ UninovaFapi University Center.

INTRODUCTION: Iron deficiency anemia is characterized by elevated hemoglobin levels in the blood due to a lack of iron, an essential mineral for its production. Moreover, it is the most common cause of anemia in Brazil. This condition is associated with various factors, including poor diet and unfavorable socioeconomic conditions. Among its main consequences are cognitive and motor developmental delays in children, an increased risk of maternal mortality. **OBJECTIVES:** To identify the epidemiological profile of hospitalizations due to iron deficiency anemia during the years 2020-2023, as recorded on the website of the Department of Informatics of the Unified Health System (DATASUS). **METHODS:** This is a descriptive epidemiological study with a quantitative approach, conducted using data from the Notifiable Diseases Information System (SINAN), obtained from the DATASUS website. The variables used were: hospitalizations per year, type of care, region, gender, age group, and race. **RESULTS AND DISCUSSION:** A total of 52,667 cases of hospitalizations due to iron deficiency anemia in Brazil were analyzed. Of these, the year with the highest frequency was 2023, with

29% (15,586) of cases, followed by 2022 with 26% (13,726) cases. The year with the lowest number was 2020, with 20% (10,561). Thus, there is a progressive increase in the number of cases, driven by the rise in the consumption of processed foods, which limits the intake of nutritious foods. Regarding the type of care, 94.2% (49,645) were emergency cases, and 5.8% (3,022) were elective. Furthermore, concerning the regions of Brazil, the most affected region was the Southeast, with 41.6% (21,942) of cases, while the North was the least affected, with 8.2% (4,369). Thus, although the Southeast region is economically developed, it exhibits high levels of social inequality and poverty, which are directly associated with diets lacking iron-rich and nutritious foods. In addition, regarding gender, women were more affected, accounting for 58% (30,783) of cases, while men represented 42% (21,884). Factors such as the menstrual cycle, breastfeeding, and contraceptive use are some of the causes of this discrepancy. In terms of age, the most affected group was elderly individuals over 70 years, accounting for 35% (18,561) of cases. This may be caused by a decrease in nutrient absorption that this age group may experience, as well as inadequate intake due to chewing difficulties or dietary restrictions. The least affected group was children aged 5 to 9, with 0.8% (460) of cases. Additionally, regarding race, the prevalence of anemia is higher among mixed-race individuals, with 42% (22,551) of cases, followed by white individuals with 34% (17,923). This can be justified by the economic difficulties that this racial group typically faces in the country, leading to lower consumption of iron-rich foods.

CONCLUSION: Therefore, it is noted that iron deficiency anemia is a significant public health challenge in Brazil. In summary, a progressive increase in hospitalizations has been observed since 2020. Moreover, the Southeast region, along with women, the elderly, and mixed-race individuals, are the most affected in emergency cases. Thus, supplementation and fortification programs, improvements in socioeconomic conditions, and better access to healthcare services are necessary to reduce the prevalence of iron deficiency anemia in Brazil.

68. EPIDEMIOLOGICAL STUDY OF CONGENITAL SYPHILIS CASES IN PIAUÍ AND THE NORTHEAST REGION IN THE LAST FIVE YEARS (2019-2023).

Rafael Antonni Lopes Normando¹, Laura Martins Soares Cortez¹, Livia Ferreira da Silva¹, Maria Eduarda Lustosa Carvalho², Mateus Lustosa Teixeira¹, Ana Maria Peace Arêa Leão Pinheiro¹.

¹Federal University of Piauí, ²University Center Unifacid Idomed.

INTRODUCTION: Syphilis is a chronic, sometimes asymptomatic, sexually transmitted infection that can be treated and cured, but which still affects many people, especially the most vulnerable population. One of the ways this disease is transmitted is from the pregnant woman to the fetus, transplacentally or during passage through the birth canal, which can lead to complications such as fetal splenomegaly, anemia and placentomegaly. **OBJECTIVE:** To trace the epidemiological profile of congenital syphilis cases in Piauí and the northeast region between 2019 and 2023, associating it with whether or not prenatal care was provided. **METHODS:** A descriptive and retrospective epidemiologic study, with data from the Sistema de Informação de Agravos de Notificação (SINAN), in the state of Piauí and in the Northeast region from 2019 to 2023. The following variables were analyzed: notified cases, evolution and prenatal care.

RESULTS AND DISCUSSION: In the Northeast, 30,735 cases of congenital syphilis were confirmed between 2019 and 2023. Of these, 7104 in 2019 and 3068 in 2023, which represents a 131.55% reduction in the number of cases. Of the total number of notifications, 423 died

from the notified disease (1.38%). In addition, 25,570 infected pregnant women underwent prenatal care, of which 275 neonates died from the disease (1.07%). Among the 2,928 pregnant women who were not monitored, 90 babies died from the disease (3.07%). These figures indicate that the numbers of syphilis in the northeast are still very high and worrying, and need constant monitoring if cases are to continue to fall. In Piauí, 1,355 cases were confirmed, which represents 4.41% of the total cases in the Northeast. Of these, 44 resulted in death from the disease (3.25%). As for prenatal care, 1,167 infected women underwent it and 38 newborns died from the disease (3.26%), while 150 did not and 6 died from it (4.00%). In relation to the number of deaths with and without prenatal care in Piauí, the percentage difference was minimal, but extremely high in both cases, which indicates a precarious condition of prevention, control and treatment of the disease in the state, which urgently needs to be improved. **CONCLUSION:** In the Northeast, the evolution of congenital syphilis was more positive among babies followed up from the intrauterine period, however, in the state of Piauí, the difference was minimal in percentage terms. This state, in relation to the Northeast, did not have a high number of cases of congenital syphilis, but mortality is significant even with prenatal care, which indicates the poor quality of the services provided to pregnant women. Therefore, the importance of diagnosing syphilis in mothers and carrying out quality prenatal care is clear, in order to reduce the number of deaths, while it is also important to emphasize the need to improve the treatment and prevention of congenital syphilis in Piauí.

69. POLYNEUROPATHY ASSOCIATED WITH ATAXIA AND ANTIGAD: A CASE REPORT

Andréia Maria dos Santos Carvalho¹, Victor José Campelo Vilanova¹, Jonh Herberthon de Souza Araújo¹, Maria Julia Oliveira de Moura², Cristina Reis de Sousa³ and Tiberio Silva Borges dos Santos⁴.

¹ State University of Piauí; ² UniFacid IDOMED; ³ Federal University of Piauí; ⁴ University Hospital of Piauí.

INTRODUCTION: Polyneuropathy is a condition characterized by the simultaneous impairment of multiple peripheral nerves, typically presenting with diffuse or multifocal sensory involvement, often symmetric and bilateral. When associated with ataxia and Anti-GAD—manifesting as a lack of motor coordination and inhibition of glutamic acid decarboxylase, respectively—polyneuropathy progresses to cerebellar atrophy, particularly in the vermis. This results from the selective loss of Purkinje cells and reduced GABAergic transmission. General symptoms include falls, unilateral dysfunction, gait ataxia, dysmetria, and dysidiadochokinesia. **CASE REPORT:** A 53-year-old female from Teresina, PI, working in general services, presented to a public hospital in Teresina on November 9, 2021, for outpatient consultation with a one-year history of symptoms, including difficulty walking, falls, difficulty holding objects, altered speech, slurred speech, and reduced bilateral visual acuity. Initial tests revealed positive Anti-GAD antibodies (greater than 2000 UI/mL). She was hospitalized, and infectious causes were ruled out. Imaging showed no abnormalities. The patient was diagnosed with anti-GAD ataxia and underwent her first cycle of methylprednisolone pulse therapy, followed by four additional cycles, the last one in April 2022. At her follow-up on December 28, 2022, she reported progressive worsening of symptoms, particularly speech and ambulation, requiring the use of a walker. She was hospitalized again for immunotherapy evaluation and further tests, which showed no imaging changes. During this hospitalization, she was alert, oriented, with dysarthric speech, gait ataxia, dysmetria, and movement decomposition during index-nose

and heel-to-shin tests, along with dysdiadochokinesia. Five days of intravenous human immunoglobulin were administered from January 10-14, 2023, followed by discharge for outpatient follow-up. The patient returned to the hospital on November 13, 2023, reporting further progression of symptoms, mainly speech and ambulation difficulties, now requiring a walker and, at times, a wheelchair. Examination revealed limited upward gaze, bilateral dysdiadochokinesia, slowed saccades, hyperreflexia of the brachioradialis, slurred speech, dysmetria, and minimal movement decomposition on both index-nose and index-index tests. Anti-GAD antibody levels remained above 2000 UI/mL. She was hospitalized for a 6th cycle of methylprednisolone pulse therapy. Rituximab was requested, and the patient was discharged for continued outpatient care. **CONCLUSION:** Polyneuropathy remains a challenge for the medical community, often presenting atypically and in association with other comorbidities, adding complexity to this disease as illustrated by this case. Therefore, it is essential to discuss this pathology to clarify aspects such as its varied symptoms, diagnosis, and treatment.

70. VITILIGO INDUCED BY PROLONGED USE OF NIVOLUMAB IN A PATIENT WITH METASTATIC MELANOMA: A CASE REPORT

Authors: Ana Clara Rodrigues da Silva¹, Iasmim Andrade de Meneses¹, Gabriely Costa Viana¹, Izabela Sousa Vasconcelos¹, Mayk Dwyllio Moura Carvalho¹ and Suilane Coelho Ribeiro Oliveira¹.

¹ State University of Piauí.

INTRODUCTION: Nivolumab, a programmed death-1 (PD-1) inhibitor, is effective in the treatment of unresectable melanoma by directing T cell responses against tumor cells. However, the nonspecific activation of the immune system is associated with adverse side effects, particularly vitiligo, an autoimmune disorder characterized by the selective loss of melanocytes. This case report aims to describe the occurrence of nivolumab-induced vitiligo in a patient with stage III melanoma, highlighting the relationship between immunomodulatory therapy and the manifestation of autoimmune skin diseases. **CASE REPORT:** A 74-year-old female patient was diagnosed with acral melanoma on the right hallux, stage IIIC (T4bN2bM0), with a negative BRAF V600E mutation. The diagnosis was confirmed after amputation of the hallux at the level of the proximal phalanx, revealing a malignant nodular melanocytic lesion with vertical growth (Clark level V, Breslow thickness 1 mm) and a mitotic index of 3 mitoses/mm². There was bone invasion with free margins both on the dorsal and plantar surfaces of the foot. The inguinal sentinel lymph node showed melanoma metastasis (1.3 mm in the largest axis), with confirmation of metastasis in one of six analyzed inguinal lymph nodes (1/6). The search for micrometastases by immunohistochemistry (IHC) was positive for S-100, Melan A, and HMB45. After complete resection of the disease (EC III), the patient began treatment with Nivolumab at 3 mg/kg IV every two weeks in October 2017 as adjuvant therapy. After four doses, there was a reduction in the size of the necrotic lymph nodes, with no additional lymphadenopathy. However, treatment was interrupted after four cycles due to lack of access to the medication in the public healthcare system. The patient developed generalized skin hypopigmentation (CTCAE grade 2) and irregular multifocal hyperpigmentation during treatment pauses. The patient continues to be regularly monitored, awaiting legal resolution to resume Nivolumab treatment and manage the skin manifestations induced by the medication. This case highlights the challenges faced in advanced melanoma therapy,

emphasizing the importance of continuous access to medication and effective management of treatment-related adverse events. **FINAL CONSIDERATIONS:** The association between vitiligo and the use of Nivolumab has the highest level of evidence among checkpoint inhibitor therapies. Therefore, describing such a case is extremely important for contributing clinical-epidemiological data related to these diseases to the literature.

71. POLYNEUROPATHY ASSOCIATED WITH ATAXIA AND ANTIGAD: A CASE REPORT

Andréia Maria dos Santos Carvalho¹, Victor José Campelo Vilanova¹, Jonh Herberthon de Souza Araújo¹, Maria Julia Oliveira de Moura², Cristina Reis de Sousa³ and Tiberio Silva Borges dos Santos⁴.

¹ State University of Piauí; ² UniFacid IDOMED; ³ Federal University of Piauí; ⁴ University Hospital of Piauí.

INTRODUCTION: Polyneuropathy is a condition characterized by the simultaneous impairment of multiple peripheral nerves, typically presenting with diffuse or multifocal sensory involvement, often symmetric and bilateral. When associated with ataxia and Anti-GAD—manifesting as a lack of motor coordination and inhibition of glutamic acid decarboxylase, respectively—polyneuropathy progresses to cerebellar atrophy, particularly in the vermis. This results from the selective loss of Purkinje cells and reduced GABAergic transmission. General symptoms include falls, unilateral dysfunction, gait ataxia, dysmetria, and dysdiadochokinesia. **CASE REPORT:** A 53-year-old female from Teresina, PI, working in general services, presented to a public hospital in Teresina on November 9, 2021, for outpatient consultation with a one-year history of symptoms, including difficulty walking, falls, difficulty holding objects, altered speech, slurred speech, and reduced bilateral visual acuity. Initial tests revealed positive Anti-GAD antibodies (greater than 2000 UI/mL). She was hospitalized, and infectious causes were ruled out. Imaging showed no abnormalities. The patient was diagnosed with anti-GAD ataxia and underwent her first cycle of methylprednisolone pulse therapy, followed by four additional cycles, the last one in April 2022. At her follow-up on December 28, 2022, she reported progressive worsening of symptoms, particularly speech and ambulation, requiring the use of a walker. She was hospitalized again for immunotherapy evaluation and further tests, which showed no imaging changes. During this hospitalization, she was alert, oriented, with dysarthric speech, gait ataxia, dysmetria, and movement decomposition during index-nose and heel-to-shin tests, along with dysdiadochokinesia. Five days of intravenous human immunoglobulin were administered from January 10-14, 2023, followed by discharge for outpatient follow-up. The patient returned to the hospital on November 13, 2023, reporting further progression of symptoms, mainly speech and ambulation difficulties, now requiring a walker and, at times, a wheelchair. Examination revealed limited upward gaze, bilateral dysdiadochokinesia, slowed saccades, hyperreflexia of the brachioradialis, slurred speech, dysmetria, and minimal movement decomposition on both index-nose and index-index tests. Anti-GAD antibody levels remained above 2000 UI/mL. She was hospitalized for a 6th cycle of methylprednisolone pulse therapy. Rituximab was requested, and the patient was discharged for continued outpatient care. **CONCLUSION:** Polyneuropathy remains a challenge for the medical community, often presenting atypically and in association with other comorbidities, adding complexity to this disease as illustrated by this case. Therefore, it is essential to discuss this pathology to clarify aspects such as its varied symptoms, diagnosis, and treatment.

72. EPIDEMIOLOGICAL PROFILE OF SCORPION ACCIDENT CASES IN THE STATE OF PIAUÍ: A DECADE ANALYSIS

Ana Luísa Silva Melo¹, Gabriela Medeiros Celestino de Sousa¹, Gláucia Alves Oliveira¹, Luanny Rodrigues Sampaio Ferreira¹, Sofia Rocha Santos¹ and Augusto César Evelin Rodrigues².

¹Students of the Integral Differential College Unifacid – Idomed; ²Faculty Member of the Integral Differential College Unifacid – Idomed.

INTRODUCTION: Scorpions are invertebrates belonging to the arachnid class, found in almost all terrestrial ecosystems. Scorpion accidents are clinical cases of poisoning caused when a scorpion injects its venom through its stinger. Urban expansion alters the habitat of these species, increasing their interaction with the population. **OBJECTIVE:** To analyze the epidemiological profile of scorpion accident cases in the state of Piauí between 2014 and 2023. **METHODOLOGY:** This was a retrospective, quantitative, descriptive epidemiological study concerning scorpion accident cases in the state of Piauí from 2014 to 2023. Data were obtained from the Department of Informatics of the Unified Health System (DATASUS), analyzing the following variables: type of accident, year of accident, sex, month of accident, and age group. Microsoft Excel was used for data organization and tabulation. **RESULTS AND DISCUSSION:** During the analyzed period, 39,056 cases of accidents with venomous animals were reported in the state of Piauí, with 24,576 (62.9%) involving scorpions, representing an average of 2,457.6 cases per year. Regarding reported cases by sex, there was no significant discrepancy, with a higher incidence among males, totaling 13,060 records (53.1%). This higher occurrence among men can be attributed to scorpions' hiding habits in debris and garbage, materials predominantly handled by males. Additionally, concerning age groups, the highest number of notifications occurred among individuals aged 20 to 39 years, with 7,548 records, indicating 30.7% of total cases. This scenario may be explained by this age group representing the economically active population, making them more exposed to attacks by venomous animals such as scorpions. Regarding occurrences, the highest notification was recorded in 2022 with 4,050 cases, representing about 16.5% of total cases. As for monthly notifications, August had the highest number of cases with 2,614 (10.6%), as this month is one of the hottest of the year and favors scorpion reproduction in the analyzed region. Finally, 20,664 cases (about 84.1%) resulted in recovery, demonstrating the effectiveness of available treatments in the region for venomous animal attacks, specifically scorpions. **CONCLUSION:** The results indicate that scorpion accidents stand out among accidents involving venomous animals. Cases were slightly more frequent among males, with the age group of 20 to 39 years being the most affected. The highest number of notifications occurred in August, and most cases resulted in recovery. These data highlight the importance of intensifying surveillance and epidemiological control measures for scorpions to prevent scorpion accidents in the state of Piauí.

73. CHRONIC PELVIC PAIN IN A PATIENT WITH MAY-THURNER SYNDROME UNDERGOING ENDOVASCULAR TREATMENT: CASE REPORT

Luma Sérvulo de Carvalho¹, Andressa Lima Sena Rosa¹, Jenie Lana Evangelista de Sousa Luz¹, Jéssica Beatriz da Silva Loiola¹, Maria Rita do Nascimento Teixeira Leite¹ and Karla Cybele Lêda Santos de Castro².

¹State University of Piauí; ²Federal University of Piauí.

INTRODUCTION: May-Thurner Syndrome (MTS) is characterized by an anatomical variation due to compression of the left iliac vein by the right iliac artery, resulting in various symptoms in the pelvic region, such as edema, pain, varicose veins and deep vein thrombosis (DVT). This condition is rare and more common in women, especially between the third and fifth decades of life. Current treatment consists of endovascular intervention, a less aggressive technique that includes procedures such as angioplasty and stent placement. **CASE REPORT:** R.S.P., a 31-year-old female patient, sought gynecological care complaining of chronic pelvic pain. She reported pain in the left iliac fossa and left perineal region since the previous year, plus lower back pain, left flank pain and right pelvic pain over time, complaining of constant and limiting dyspareunia. In addition, she denied tenesmus, lower limb pain, hematuria, epigastralgia, nausea and digestive problems. The hypotheses of endometriosis, adenomyosis and pelvic inflammatory disease were suggested. Initially, a screening panel for sexually transmitted infections was carried out, as well as laboratory blood and urine tests which were normal, and a transvaginal ultrasound which showed prominent bilateral pelvic varicose veins. Furthermore, in order to rule out endometriosis and adenomyosis, an MRI scan of the pelvis was carried out which showed prominent pelvic varicose veins, confirming vascular congestion. The patient was then referred to a vascular surgeon, who proceeded with the management and treatment of the case. In order to study the pelvic varicose veins and investigate Nutcracker and MTS, abdominal and pelvic computed tomography angiography was performed, which showed compression of the left iliac vein by the right common iliac artery. Thus, the diagnosis was bilateral large pelvic varices and compression of the left iliac vein, characterizing MTS. In addition, in order to better delineate the case, with a view to surgical planning, abdominopelvic angiotomography was performed, showing a tangle of aberrant veins in the left renal hilum; however, the patient had no pain in the renal fossa and also reported no pain during ultrasound in this area, which usually occurs in Nutcracker Syndrome, ruling out this hypothesis. Finally, ascending phlebography of the right and left common femoral veins was performed. Using phlebography and intravascular ultrasound (IVUS) of the left iliac venous axis, the endovascular procedure was performed which, given the presence of severe stenosis of the iliac vein under the right iliac artery, consisted of placing a stent, excluding all anomalous collateral circulation. Sometime later, the patient returned to the gynecologist's office with an improvement in her complaints following the vascular intervention. **FINAL CONSIDERATIONS:** MTS represents an underdiagnosed and often overlooked cause of chronic pelvic pain, which can significantly impact patients' quality of life. Thus, a comprehensive assessment of the possible etiologies of this pain is essential for accurate diagnosis and effective treatment. In addition, knowledge about MTS and its clinical presentations, combined with a multidisciplinary approach, is crucial to ensure adequate and targeted patient management considering its specifications. It is therefore essential to emphasize in clinical practice the inclusion of MTS in the differential diagnoses of chronic pelvic pain in order to optimize the care and well-being of affected individuals.

74. **EFFECT OF VITAMIN D ON LIVER FUNCTION MARKERS AND ANTIOXIDANT ACTIVITY IN AN EXPERIMENTAL RAT MODEL OF DIABETES**

Letícia Beatriz Coutinho Alves¹, Maria Cecília Martins Bezerra¹; Maria Clara Mendes Coimbra¹; Rafael Armando Coutinho Aguiar¹; Joyce Lopes Macedo², Maria do Carmo de Carvalho e Martins³.

¹ Medical Students. Federal University of Piauí – UFPI; ² Master in Food and Nutrition - Federal University of Piauí – UFPI. PhD candidate in Biotechnology at the Northeast Biotechnology Network (RENORBIO); ³PhD in Biological Sciences from the Federal University of Pernambuco. Department of Biophysics and Physiology – Federal University of Piauí – UFPI.

Introduction: Vitamin D appears to have beneficial effects on glycemic control in diabetes mellitus. It is a steroid that plays an important role in calcium and phosphorus metabolism, and also exhibits antimicrobial, anti-inflammatory, and immunomodulatory actions. **Objective:** To evaluate the effects of vitamin D supplementation on liver function markers and antioxidant activity in animals with experimental diabetes. **Materials and Methods:** The experimental study was conducted with 35 male *Rattus norvegicus*, aged between 8 and 12 weeks, and weighing between 250 and 300 g, divided into one group of normal animals and four groups of diabetic animals (n=7/group). Diabetes was induced by intraperitoneal administration of streptozotocin (STZ) 50 mg/kg in citrate buffer pH 4.5. The animals in the normal control group (NC) received citrate buffer at the time of induction. After confirmation of diabetes (fasting capillary blood glucose \geq 250 mg/dL three days after induction), the diabetic animals were randomly divided into four groups and treated for 4 weeks: Diabetic control group (DC) - untreated diabetic animals; insulin group (INS): diabetic animals treated with NPH insulin 6 IU/day subcutaneously; vitamin D 0.25 µg/kg group (VD0.25): diabetic animals treated with vitamin D 0.25 µg/kg orally, and vitamin D 0.50 µg/kg group (VD0.50) treated orally. Statistical analysis was performed using Analysis of Variance (ANOVA) followed by Tukey's post-test. The research project was approved by the Animal Ethics Committee of UFPI (734/2022). **Results:** The groups treated with vitamin D at doses of 0.25 and 0.50 µg/kg, when compared to DC, showed significantly lower mean fasting capillary blood glucose levels (NC: 97.14 ± 3.22 ; DC: 487.90 ± 17.02 ; INS: 418.40 ± 22.35 ; VD0.25: 391.40 ± 30.83 ; VD0.50: 372.30 ± 34.07). There were no differences between groups in terms of liver relative weight or aspartate transaminase (AST) and alanine transaminase (ALT) levels. Regarding liver antioxidant activity, the VD0.25 group showed significantly higher catalase (CAT) enzyme activity than DC (NC: 225.40 ± 23.22 ; DC: 103.50 ± 17.43 ; INS: 199.90 ± 14.83 ; VD0.25: 211.40 ± 21.00 ; VD0.50: 166.10 ± 24.58), with no differences in superoxide dismutase activity or non-protein sulfhydryl group content. **Conclusion:** Four weeks of vitamin D supplementation, at the doses used, reduced blood glucose levels and did not affect liver function markers but improved the antioxidant defense system, as evidenced by increased catalase activity.

75. **EPIDEMIOLOGICAL ANALYSIS OF DEATHS FROM MALIGNANT NEOPLASMS OF THE LIVER AND BILIARY TRACT IN THE NORTHEAST FROM 2013 TO 2022**

Mirelle Sales de Siqueira¹, Laura Lima dos Santos², Maria Clara Farias de Miranda Feitosa³, Esterfany Raimundo Santos⁴ and José Zilton Lima Verde Santos⁵.

^{1,2,3,4,5} State University of Piauí.

INTRODUCTION: Liver and intrahepatic bile duct neoplasms are among the most common cancers worldwide, with chronic infection by hepatitis B and C viruses, alcohol-induced liver cirrhosis, and fatty liver disease as primary risk factors. Due to its late diagnosis and association with controllable risk factors, it is necessary to evaluate recent years' death cases in the Northeast region of Brazil.

OBJECTIVES: To analyze deaths from liver and bile duct neoplasms in the Northeast from 2013 to 2022. **METHODS:** This is an epidemiological, descriptive, and retrospective study using secondary data from the Department of Informatics of the Brazilian Unified Health System (DATASUS), covering the period from 2013 to 2022 in the Northeast region. Variables included: year of death, sex, age group, race, and educational level. **RESULTS:** There were 25,437 deaths in the Northeast region, with 24.9% occurring in Bahia, followed by Pernambuco (19.7%), together representing nearly half of the deaths in the region. This may be related to socioeconomic factors, healthcare access and availability, and the prevalence of risk factors in these states' populations. The year with the highest number of deaths was 2019 (10.9%). There was a predominance of males (52.8%), and the most affected age group was 60 to 79 years (53.8%), which may be associated with biological, behavioral, and exposure differences to risk factors. Men are more prone to excessive alcohol consumption and developing liver cirrhosis, in addition to having a higher prevalence of chronic hepatitis B and C infections. Regarding race, individuals of mixed race were predominant (61.3%), highlighting the intersection between health, race, and socioeconomic status. Individuals of mixed race may have less access to quality healthcare, lower income, and educational attainment, factors associated with higher risks of severe illness and mortality. The group with no formal education accounted for the highest number of deaths (24.9%), strongly linked to reduced health information access, lower adherence to preventive practices, and delayed diagnosis. **CONCLUSION:** Liver and bile duct neoplasms in the Northeast mainly affect uneducated mixed-race men aged 60 to 79 years. This study underscores the need for public health policies to minimize associated risk factors and reduce mortality rates. Additionally, it highlights the need for further studies on this subject.

76. EPIDEMIOLOGICAL ANALYSIS OF GASTRIC CANCER IN NORTHEAST BRAZIL OVER THE LAST FIVE YEARS

Aline Inês Silva Martins; Wesley da Silva Souza; Diuliane Teixeira Pereira; Lucas Adriel Rosa Bezerra; Bianca dos Anjos Piloni Ramodnil de Moura Santos

ORIENTADOR: Gastroenterologist, Universidade Estadual do Amazonas -UEA

INTRODUCTION: Gastric cancer is a malignant neoplasm that affects the stomach, an important organ of the gastrointestinal system, with a poor prognosis and a high mortality rate in the first 12 months of treatment. It is associated with infection by the bacterium *Helicobacter pylori*, smoking, alcohol consumption and high salt intake. In Brazil, it is more common in the North and Northeast regions, with prevalence inversely proportional to socioeconomic status. **OBJECTIVE:** To define the epidemiological profile of gastric cancer cases in the Northeast between 2019 and 2023. **METHODS:** This is an epidemiological, descriptive, quantitative study that analyzed gastric cancer cases in the Northeast over the last five years. Secondary data from the SIA SUS oncology panel available on DataSUS were used, referring to ICD C16 Malignant Neoplasm of the Stomach in the Northeast by state of residence between 2019 and 2023. The variables analyzed: cases by UF, gender, age group, staging, therapeutic modality. **RESULTS AND DISCUSSION:** During the period analyzed, 21,720 cases of gastric cancer were reported in the Northeast of Brazil. Females accounted for 50.1% of diagnoses. The 50-79 age group accounted for 79.9% of all notifications in the period. The most affected age groups were 65 to 69 years (2,693 cases), 60 to 64 years (2,599 cases), 70 to 74 years (2,216 cases), 50 to 54 years (2,188 cases), respectively. The state with the highest number of cases was Alagoas with 4,493 diagnoses, followed by Rio Grande Do Norte (4,105) and Pernambuco (3,602). Advanced stages (3 and 4) accounted for 30% of all diagnoses, while early stages (0, 1 and 2) accounted for 7.96% of notifications. The remaining 13,481 patients had their stage classified as "not applicable" or "unknown". The most commonly used therapeutic modality was chemotherapy, with 7,786 cases, followed by surgery (2,425). 11,056 notifications did not provide information on the treatment used. The concentration of cases between the ages of 50 and 79 corroborates the literature, since there is an association between gastric cancer and ageing. In addition, the significant proportion of cases diagnosed in advanced stages may indicate challenges in early diagnosis, due to low awareness of symptoms and limited access to care. Chemotherapy predominates as the main therapy, also reiterating the existing literature. The prevalence in female patients differs from the literature, with a reported 1.5 to 2.5 times higher prevalence in males compared to females. **CONCLUSION:** In summary, a greater number of cases were observed in the elderly population, aged 65 to 69, with an emphasis on females. The prevalence of diagnoses in the states of Alagoas, Rio Grande do Norte and Pernambuco may be related to greater access to screening, compared to states with lower socioeconomic development, confirming the relationship between this factor and the prevalence of the disease. In addition, the magnitude of notifications without information on treatment reveals a difficulty in the follow-up of these patients that needs to be reviewed. Measures are urgently needed to ensure that the Northeastern states are able to diagnose this neoplasm early and provide adequate treatment for these patients, which is imperative for a good prognosis and quality of life.

77. AVALIAÇÃO DO EFEITO ANALGÉSICO E ANTI-INFLAMATÓRIO DO ESTRAGOL

Filipe de Carvalho Soares¹, Victor José Campelo Vilanova¹, João Pedro Magalhães Leite¹, Heloísa Cronemberger Rufino Madeiro¹, Antonio Levi Farias Borba¹ and Rosemarie Brandim Marques¹.

¹ State University of Piauí.

INTRODUCTION: Estragole is a chemical constituent from the phenylpropanoid class, found in plant species like *Ravensara anisata*, *Ocimum basilicum*, and *Croton zehntneri*. Previous studies have identified properties such as gastric protection, antibacterial action, skeletal muscle contraction, anxiolytic effects, and inhibition of anti-inflammatory mediator production. **OBJECTIVES:** To evaluate the analgesic and anti-inflammatory effects of estragole. **METHODS:** This study was approved by the Ethics Committee on Animal Use (CEUA/UESPI) under the number 016632/2022-86. Adult male Swiss albino mice (*Mus musculus*), weighing between 20 and 30g, n=6/group, were divided into groups: (1) negative control group received 0.1 mL/10g/animal of 0.9% saline solution, orally; (2) positive control group received morphine (10 mg/kg, subcutaneously); (3) test groups received estragole at doses of 30, 60, and 120 mg/kg, orally. The formalin test was conducted by intraplantar administration of 2% formalin, measuring the paw licking time over 30 minutes—5 initial minutes (acute or nociceptive pain phase), followed by 15 minutes without recording, and the last 10 minutes (chronic or inflammatory phase). Data were analyzed using One-Way ANOVA, followed by Tukey's post-test with a significance level of 5%. **RESULTS:** In the acute phase of the test, estragole doses of 30 mg/kg (25.43±8.046), 60 mg/kg (24.86±8.021), and 120 mg/kg (17.66±6.729) showed a reduction in paw licking time compared to the negative control (60.25±18.31), with p<0.05. In the chronic phase, all doses also showed a significant reduction compared to the negative control (67.05±23.34), with 30 mg/kg (2.22±3.915), 60 mg/kg (5.638±11.47), and 120 mg/kg (0.0±0.0). This indicates that estragole has both analgesic and anti-inflammatory potential. **CONCLUSION:** The results of this study clearly demonstrate the analgesic and anti-inflammatory potential of estragole, evidenced by a significant reduction in paw licking time in mice during the formalin test. In both acute and chronic phases, all doses of estragole (30, 60, and 120 mg/kg) were effective compared to the negative control, suggesting that estragole possesses properties that can alleviate both immediate and persistent pain. The significant reduction in paw licking time observed with estragole doses compared to the saline control supports the hypothesis that estragole has analgesic properties. The acute phase, characterized by the initial pain response, showed consistent reductions with all estragole doses, indicating dose-dependent efficacy. The chronic phase, associated with inflammation and persistent pain, showed even more pronounced reductions, particularly at the 120 mg/kg dose, which completely eliminated the licking response. This study suggests that estragole has considerable potential as an analgesic and anti-inflammatory agent. Although the results are promising, additional studies are needed to investigate the mechanisms of action of estragole.

78. EPIDEMIOLOGICAL ANALYSIS OF THE ASSOCIATION BETWEEN THE NUMBER OF ZIKA VIRUS CASES AND MICROCEPHALY IN THE NORTHEAST REGION FROM 2015 TO 2024

Eliomar de Carvalho Santos Filho¹, Andréia Maria dos Santos Carvalho¹, Jonsley Moraes Rêgo da Silva¹, Yolanda Castelo Branco Macêdo¹, Vitória de Carvalho Ferreira Portela¹ and Liliane Maria Soares Martins¹.

¹ State University of Piauí.

INTRODUCTION: The Zika Virus (ZIKV), a member of the Flaviviridae family, infects humans through the bite of female *Aedes aegypti* mosquitoes. Symptoms of the disease can include fever, rash and joint pain, but many cases are asymptomatic. ZIKV is associated with microcephaly, a congenital condition in which the newborn's head circumference is smaller than expected for its gestational age. This correlation was proven after an outbreak of the disease in northeastern Brazil, where there was a significant increase in cases of microcephaly in babies born to mothers infected with the virus during pregnancy. **OBJECTIVES:** An epidemiological analysis of how cases of microcephaly and ZIKV infection are quantitatively related in Northeast Brazil between 2015 and 2024. **METHODS:** A descriptive, quantitative cross-sectional study based on data from the Notifiable Diseases Information System (SINAN) and the Live Birth Information System (SINASC) from 2015 to 2024. The ZIKV charts were analyzed for color/race, age group, gender, gestational period of infection and the state where the cases were reported, as well as the annual number of microcephaly diagnoses and their geographical distribution, establishing a correlation between the data. **RESULTS:** In the period analyzed, 192,866 notifications of infection with the virus were recorded in northeastern Brazil. The majority of those infected were brown (51.64%), followed by white (11.59%) and black (3.77%). The most affected age group was between 20 and 39 years (38.46%), followed by 40 to 59 years (24.19%) and 15 to 19 years (8.59%). Females accounted for 64.36% of infections, while males accounted for 35.58%. The gestational period in which the infection is most prevalent is the second trimester of pregnancy, corresponding to 37.64% among the 14,346 pregnant women notified. In addition, the northeastern state with the highest number of cases was Bahia, which accounted for 44.17% of the total, followed by Rio Grande do Norte (11.73%) and Ceará (10.93%). In the Northeast, there were a significant number of microcephaly cases compared to other regions during this period, totaling 3,227 reported cases, with the highest concentration in Pernambuco (30.37%), followed by Bahia (23.46%) and Ceará (11.15%). The peak number of notifications was in 2016 for both conditions. It is worrying that the majority of ZIKV infections occurred in women of childbearing age, especially in the Northeast, where inadequate sociodemographic conditions increase the risk of compromising the quality of maternal and child life. In Pernambuco, a more potent strain of the Zika virus may have contributed to the increase in cases of microcephaly in pregnant women. After the link between the virus and microcephaly was proven, prevention and awareness measures were implemented, resulting in a reduction in cases of these diseases in recent years. Preventing infection in pregnant women is essential to avoid irreversible fetal damage. **CONCLUSION:** During the period studied, Zika virus infections were more frequent among brown women, aged between 20 and 39, living in northeastern Brazil, especially in Bahia. In pregnant women, infections were more common in the second trimester of pregnancy and were associated with microcephaly, mainly in the states of Pernambuco and Bahia, with the peak of notifications in 2016.

79. MORTALITY FROM CHAGAS DISEASE: EPIDEMIOLOGICAL PROFILE IN THE STATE OF PIAUÍ FROM 2013 TO 2022.

Gabriel Alves Araújo¹, Antônia Thalya Oliveira Campelo¹, Luis Henrique Rios Moreira Rego¹, Lucas Macedo Linhares¹, Alberto da Costa Sousa Neto¹, Liliane Maria Soares Martins¹.

¹ State University of Piauí.

INTRODUCTION: Chagas disease (CD), caused by *Trypanosoma cruzi*, is transmitted by triatomine bugs and other routes. In the acute phase, the parasite is detectable in the blood, but after two months, only specific tests can identify it. The chronic phase includes indeterminate, cardiac, and digestive forms. The indeterminate form can last 10 to 15 years without symptoms, while the cardiac form has high mortality, and the digestive form causes megaesophagus and megacolon. Environmental and social factors, such as urbanization and poverty, influence CD. Recognized by the WHO as a neglected tropical disease, CD poses a significant health challenge in Latin America and globally. This study aims to identify vulnerable groups to CD, addressing this issue in Brazilian public health. **OBJECTIVE:** To assess the epidemiological profile of deaths from CD in Piauí over a decade. **METHODS:** This descriptive, quantitative study used secondary data from the Mortality Information System (SIM) of the Unified Health System (SUS), covering deaths from Chagas disease (ICD-B57) among residents of Piauí from 2013 to 2022. Variables analyzed included sex, race, age group, education level, place, and year of death. **RESULTS:** A total of 582 deaths were recorded, averaging 58 per year (standard deviation 9.0). Of these, 55.6% occurred in hospitals and 39.3% at home. The most affected groups were males (58.2%), mixed-race individuals (66.8%), those over 50 (93.6%), and individuals with low or no education (71.6%). These data reflect CD's mortality pattern, influenced by factors like endemic regions, infection intensity, parasite strain, and immune status. Consistent with prior studies, higher mortality rates were seen in older individuals (especially those aged 60 to 79) and males. The gender gap in mortality narrows with age due to biological and social factors. The chronic cardiac form of CD is highly lethal, leading to complications like heart failure and sudden death. Regional mortality variations are influenced by individual and parasite characteristics. Prevention and treatment strategies must consider these factors to protect vulnerable populations. **CONCLUSION:** Chagas disease mainly affects men, mixed-race individuals, people over 50 years, and those with low education. Regional and demographic disparities call for tailored prevention and treatment strategies. The use of secondary data, such as SIM, has limitations in coverage, leading to underreporting and inaccurate mortality estimates. Improving the quality of death certificate reporting is crucial for accurate data.

This work is licensed under a [Creative Commons Attribution 4.0 International License](#)

ISSN 2076-6327

This journal is published by [Pitt Open Library Publishing](#)



