

chapters. A few codes were added from one version to another, maintaining the original construct throughout updates.

**Conclusion:** The SCIM linkage to ICF showed that the aim of the assessment is the Activities and Participation component, contemplating 64% of the codes considered relevant in the literature for people with chronic SCI. The instrument briefly approaches the Body Structures and Body Functions components, reflecting 22% of this component's codes considered the most relevant for this population, showing that the assessment of this component might have to be complemented by other instruments. The SCIM IV is the most recent and the one linked to the highest number of ICF codes.

**Implications:** The ICF linkage to each SCIM version's items in association with the use of ICF qualifiers will help health professionals to elaborate reports for SCI patients, allowing the use of an international classification to describe functional independence and enabling communication between health professionals. Furthermore, by identifying the ICF components contemplated by SCIM versions, this paper helps health professionals plan the assessment of SCI individuals.

**Keywords:** Spinal Cord Injury, SCIM, ICF

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91

## PHYSICAL ACTIVITY OF GYNECOLOGICAL CANCER SURVIVORS IN THE FIRST AND FOURTH QUARTER AFTER HIGH DOSE RATE BRACHYTHERAPY

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**Background:** Gynecological cancers develop in the female reproductive system and include cancer of the cervix, uterus, ovaries, fallopian tubes, vulva, and vagina. High dose rate brachytherapy (BATD) is often used in the treatment of gynecological malignancies, however, it can induce serious side effects of late onset, such as changes in the bowel, urinary tract/bladder and vagina. The practice of physical activity (PA) has positive results on the side effects of gynecological cancer and its treatment.

**Objectives:** To compare the level of PA in women who survived gynecological cancer in the first and fourth trimester after BATD at a reference oncology institution in southern Brazil.

**Methods:** Retrospective and longitudinal study based on electronic medical records of women with gynecological cancer treated at the physiotherapy outpatient clinic of the Oncological Research Center (CEPON) in Santa Catarina. The short version of the Physical Activity Questionnaire (IPAQ) was used to assess the level of PA. The collected information was stored in a spreadsheet in Microsoft the IBM SPSS program, version 20.0, was used for statistical analysis.

Variables were analyzed descriptively using simple frequency and percentages (categorical variables) and measures of position and dispersion (numerical variables). The Kolmogorov-Smirnov test was performed to verify the normality of the data. To compare the variables related to PA according to the IPAQ (PA time - minutes per day; weekly frequency; sitting time) between the first trimester after radiotherapy and the fourth trimester, the Wilcoxon test was used, with the significance level adopted as 5%.

**Results:** 34 participants were included with a mean age of  $53.4 \pm 13.5$  years. Most were classified as insufficiently active in both the first (55.9%) and fourth (64.7%) trimester after BATD. In addition, an increase in sedentary behavior was identified, with greater relevance in the fourth quarter, so that the average sitting time on a weekday was  $147.4 \pm 102.4$  minutes per day (min/day) in the first quarter to  $211.8 \pm 125.7$  min/day in the fourth quarter ( $p=0.007$ ); as well as the average sitting time on a weekend day, increased from  $151 \pm 103.5$  min/day on the first day to  $228.5 \pm 133.3$  min/day ( $p=0.002$ ).

**Conclusion:** It was possible to notice that the majority of gynecological cancer survivors do not reach the PA recommendations in the first and fourth trimester after BATD. It was also found that women have sedentary behavior after treatment, especially in the fourth trimester after BATD, spending more time sitting compared to the first quarter.

**Implications:** The study demonstrates the importance of encouraging the practice of physical activity among survivors of gynecological cancer, especially in cancer treatment centers.

**Keywords:** Physical activity, Brachytherapy, Gynecological Cancer

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92

## PHYSIOTHERAPY APPLIED TO PATIENTS IN THE VARIOUS STAGES OF PARKINSON'S DISEASE - WITHOUT IDENTIFICATION

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**Background:** Cellular senescence is an irreversible state of cell cycle arrest, thus being characterized by decreased cell proliferation and increased nucleus area, often acting as a tumor suppressor program. Photobiomodulation (PBM) has been used in several conditions to increase the mitochondrial response, promoting nuclear changes and cell proliferation. However, the effects of PBM on cells are still unclear.

**Objectives:** To verify the efficacy of photobiomodulation on cell senescence processes.

**Methods:** We utilized A172 glioblastoma cells transduced with H2B-mCherry by lentivirus to nuclear tagging. Treatment was done with GaAlAs Laser (850nm). Cells were divided by intensity into the following groups: C= Control, L1=  $1\text{J}/\text{cm}^2$ , L2=  $2.2\text{J}/\text{cm}^2$ , L3=  $3\text{J}/\text{cm}^2$ , L9=  $9\text{J}/\text{cm}^2$ , L15=  $15\text{J}/\text{cm}^2$ , L21=  $21\text{J}/\text{cm}^2$ , nuclear evaluation was performed at experimental times (0h, 24h, 48h and 72h). For data analysis, two-way ANOVA with the Tukey post hoc test was used. Differences were significant when  $p<0.05$ .

**Results:** PBM on intensities of  $1\text{J}/\text{cm}^2$ ,  $2.2\text{J}/\text{cm}^2$ ,  $3\text{J}/\text{cm}^2$ ,  $9\text{J}/\text{cm}^2$  e  $15\text{J}/\text{cm}^2$  showed a lower increase at the nuclear size when

compared with time 0h and 72h in the control group. All intensities (1, 2.2, 3, 9, 15, and 21 J/cm<sup>2</sup>) promoted cellular proliferation after 72 hours, while 15J/cm<sup>2</sup> presented an accentuated increase compared to groups L1, L2.2, and L3.

**Conclusion:** PBM enhanced cellular proliferation while causing a reduced nuclear increase in glioblastoma cells.

**Implications:** In this study, we found that the laser decreased the cellular senescence state from the evaluation of the morphological parameters, thus increasing cell proliferation and decreasing the nuclear area; therefore, it is an important therapeutic tool against the cellular aging process.

**Keywords:** Parkinson's, Physiotherapy, Treatment of diabetes mellitus

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**Ethics committee approval:** University for the development of Alto Vale do Itajaí - Unidavi, according to CAAE opinion number: 63508622.0.0000.5676.

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93

### WORK ABILITY PREDICTS OCCUPATIONAL HEALTH-RELATED ABSENTEEISM IN PROFESSIONAL DRIVERS: A 1-YEAR LONGITUDINAL STUDY

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**Background:** Work ability (WA) is considered the result of the interaction of personal, social, and other factors related to the work environment. To what extent WA can predict absenteeism at work due to occupational health in professional drivers remains poorly investigated.

**Objectives:** To analyze the association between work ability and occupational health-related absenteeism at work in professional drivers.

**Methods:** From 2020 to 2021, 449 professional drivers were assessed for sociodemographic information, lifestyle (Baecke questionnaire, Work Stress Scale), and work ability (Work Ability Index, WAI) in Curitiba, Paraná (Brazil). Follow-up assessments were conducted at 6 and 12 months by telephone to answer 3 questions that aimed at information about professional performance, situations of occupational absenteeism, and accidents at work.

**Results:** After 12 months of the initial interview, 270/449 drivers (60%) remained as research participants and the others did not remain active in the profession (n=29/449, 7%) or did not respond to telephone contact (n= 53/449, 12%). WAI was inversely associated ( $\beta=-0.119$  CI 95% -0.233 to -0.006,  $P=0.039$ ) with general absenteeism at 12 months, explaining better WAI variability and showing a better fit of the latter model (AIC=137,  $R^2=0.028$ ,  $P=0.074$  vs.  $R^2=0.050$ , AIC=92,  $P=0.039$ ). Separating the reasons for absenteeism between occupational health and accidents at work, we concluded that WAI was inversely associated with absenteeism due to occupational health at 6 months ( $\beta=-0.096$  CI95% -0.187 to -0.006,  $P=0.037$ ) and accidents at work at 12 months ( $\beta=-0.189$  95% CI -0.331 to -0.047,  $P=0.009$ ).

**Conclusion:** Work ability can predict 1-year absenteeism due to occupational health in professional drivers.

**Implications:** Absenteeism due to occupational health can be detected using current work ability information in professional drivers. Further studies are required to test whether ergonomic interventions can promote occupational health and decrease absenteeism in this population.

**Keywords:** Professional drivers, Ability to work, Occupational health

**Conflict of interest:** The authors declare no conflict of interest.

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94

### CARACTERIZATION OF MANUAL PREFERENCE IN CORPUS CALLOSUM DYSGENESIS

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**Background:** Corpus callosum dysgenesis (CCD) is a neurodevelopmental malformation characterized by the total or partial absence or hypoplasia of the corpus callosum (CC); the structure responsible for connecting both cerebral hemispheres. CCD is associated with cognitive, social, visual, auditory, motor, somatosensory and language alterations. Considering that CC seems to play an important role in the establishment of cerebral asymmetries, whether DCC patients have an indeterminate or strong handedness is an open question we addressed here.

**Objectives:** This study aimed at investigating the influence of CCD on manual preference.

**Methods:** An observational study with nine DCC patients were recruited from the Instituto D'Or de Pesquisa e Ensino (Rio de Janeiro, Brazil). The Edinburgh Handedness Inventory was used to assess manual preference. The inventory has 10 items: writing, drawing, throwing, scissors, toothbrush, knife, spoon, broom, match and open a box. The laterality quotient (LQ) was applied as follows:  $LQ = [(R-L) / (R+L) \times 100]$ , ranging from -100 (strong left-handedness) to +100 (strong right-handedness). The statistical analysis involves data description by means of number (%) of occurrences or mean ( $\pm$ standard deviation).

**Results:** Regarding the clinical characteristics of the sample, two types of CCD were identified: Total Agenesis (N = 6, 66.3%) and CC Hypoplasia (N = 3, 33%). Furthermore, the results showed that the type of CDD was isolated (Total Agenesis: N = 4, 44.4%; CC Hypoplasia: N = 2, 22.2%) or associated with other nervous system conditions (Total Agenesis: N = 1, 11.1%; CC Hypoplasia: N = 1, 11.1%). For manual preference, all subjects obtained the maximum score of the assessment instrument (strong left-handedness: N = 3, 33.3%; strong right-handedness: N = 6, 66.6%).

**Conclusion:** These results indicate that patients have a strong manual preference, regardless of the type of CDD and associations with nervous system conditions.

**Implications:** These findings can advance knowledge in the clinical condition of CCD and, consequently, influence the treatment and further research.

**Keywords:** Manual preference, Corpus Callosum, Dysgenesis of the corpus callosum