treatment of SCC of tongue, but further studies are envisaged to understand the selectivity of the complex over the considered SCC lines and propose its possible mechanism of action. **Acknowledgements:** This study was supported by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq #309800/2021-8; #429463/2018-9), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) for the Cancer Theranostics Innovation Center (CancerThera), CEPID FAPESP #2021/10265-8), and International Atomic Energy Agency (IAEA) technical cooperation projects for development of Latin American Countries (IAEA/TCLAC: EX-BRA6033-2401375).

Keywords: Anti-proliferative activity, Oral squamous cell carcinoma, Palladium(II) complex.

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IMPAIRMENT OF THE FUNCTIONAL CAPACITY OF PATIENTS WITH ADVANCED LUNG CANCER: A PROPOSAL FOR PRACTICING PHYSICAL EXERCISES AT HOME

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Introduction/Justification: Lung cancer (LC) is a disease with high incidence, morbidity, and mortality in Brazil and around the world. Smoking plays a relevant role in the pathogenesis of CP. LC and tobacco limit lung mechanics and, consequently, gas exchange, leading to dyspnea and fatigue. The association of these symptoms with loss of weight and muscle mass secondary to protein catabolism, comorbidities and the effects of treatment limit the functional capacity of patients with LC. In turn, the reduction in patients' functional capacity favors the adoption of a sedentary lifestyle, resulting in a reduction in quality of life. Outpatient and home physical exercise protocols based on functional capacity have been successfully applied to LC patients from developed countries, but not to patients from developing countries. **Objectives:** The present study aimed to evaluate the functional capacity of patients with advanced stage LC at the Pneumology outpatient clinic of the General Hospital of the University of Campinas and propose a program of comfort measures and home physical exercises. **Materials and Methods:** The study was a cross-sectional clinical trial, approved by the Local Ethics Committee. Patients with stage III or IV non-small cell lung cancer (NSCLC), with ECOG less or equal to 2, without significant morbidities, and seen at diagnosis at the General Hospital of University of Campinas were invited to participate in the study. Patients previously treated by surgical tumor resection, chemo and/or radiotherapy or who did not want to participate in the study were excluded. Data relating to the clinical aspects of patients and pathological aspects of the tumor were obtained from medical records by the researcher responsible for the study. The functional capacity of the patients was assessed using of the six-minute walk test (6MWT) and lung function by spirometry. Comparison between groups was performed using the Mann-Whitney or Kruskal-Wallis's test. The association between categorical variables was assessed using Fisher's exact test. The linear regression test was used for multivariate analyses. **Results:** Sixty-three patients with a mean age of 65 years and a mean body mass index (BMI) of 24.4 kg/m^2 were enrolled in the study. Most patients were smokers or ex-smokers. Systemic arterial hypertension and chronic obstructive pulmonary disease were the most common comorbidities, identified in near half and a quarter of the sample, respectively. Almost 60% of the patients reported pain before the test and were medicated with analgesics before the start of the 6MWT. The patients had an average distance covered of 362.9 meters, 30% lower than the distance predicted ($p < 0.0001$). Forced vital capacity, forced expiratory volume in the first second and peak expiratory flow were also lower than predicted values ($p < 0.05$) and were indicative of ventilatory disorders. Habits, clinical and pathological aspects, such as smoking, patient's clinical condition, pain intensity, pre-existing comorbidities and tumor stage influenced the patients' functional capacity. **Conclusion:** Our patients with advanced NSCLC had a less satisfactory functional capacity than patients from developed countries. Therefore, we have created a booklet with comfort measures and recommendations for practicing physical exercises at home adapted to them. Acknowledgements: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

Keywords: Comfort measures, Home physical exercises, Lung cancer.

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THYROID DYSFUNCTION IN HEAD AND NECK SQUAMOUS CELL CARCINOMA PATIENTS AFTER EXTERNAL RADIOTHERAPY

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Introduction/Justification: Head and neck squamous cell carcinoma (HNSCC) is the seventh leading cause of cancer in the world, and substantial morbidity and mortality have been attributed to the tumor effects. Radiotherapy (RT) alone or with chemotherapy (CHEMO) and/or surgery is a commonly used treatment but, despite its beneficial effects on tumor control, it can cause early and late adverse effects. RT can cause thyroid dysfunction (TD) in patients with HNSCC, but not all patients treated similarly develop TD. **Objectives:** The study aimed to identify TD among HNSCC patients submitted to external RT, and to identify risk factors for TD in these patients. **Materials and Methods:** This is a retrospective study focusing on early and long-term thyroid function in 285 HNSCC patients treated with RT alone or alone or combined with CHEMO and/or surgery. The patients were seen at diagnosis and follow up at the Clinical Oncology Service of the University Hospital between July 2001 and March 2016. The analysis of the thyroid function data of each patient included in study was done serially after the end of treatment, using free thyroxine (FT4) and thyroid-stimulating hormone (TSH) levels. The study was approved by the Institutional Human Research Ethics Committee (number: 2312237). **Results:** One-hundred fifty-six (54.7%) patients presented TD during follow-up, 153 (53.7%) in long-term. Subclinical hypothyroidism (SCH, 43.5%) was most common, of which 68.5% persisted SCH, 21% overt hypothyroidism, 0.8% central hypothyroidism, and 9.7% returned to euthyroidism at the study end. Mean time after RT for first TD detection was 7.2 months; 3.85 for subclinical thyrotoxicosis; 17.77 for SCH, 42.0 for long-term follow-up TD. Type 2 diabetes mellitus, tumor infiltration of lymph nodes, and no tumor resection were TD risk factors. About: One-hundred fifty-six (54.7%) patients presented TD during follow-up, 153 (53.7%) in long-term. Subclinical hypothyroidism (SCH, 43.5%) was most common, of which 68.5% persisted SCH, 21% overt hypothyroidism, 0.8% central hypothyroidism, and 9.7% returned to euthyroidism at the study end. Mean time after RT for first TD detection was 7.2 months; 3.85 for subclinical thyrotoxicosis; 17.77 for SCH, 42.0 for long-term follow-up TD. Type 2 diabetes mellitus, tumor infiltration of lymph nodes, and no tumor resection were TD risk factors. About SCH progression risk, a direct association with TSH was observed, all patients with TSH $\geq$ 7.5mIU/mL had primary hypothyroidism/SCH, whereas 19.5% with TSH $<$ 7.5mIU/mL persisted euthyroid in long-term follow-up. Oral cavity tumors were associated with euthyroidism/SCH; pharynx/larynx with overt hypothyroidism. **Conclusion:** The data indicate the need for frequent monitoring of thyroid function in HNSCC patients treated with RT, particularly in those with type 2 diabetes mellitus, lymph nodes infiltrated by the tumor, and not submitted to surgical tumor resection. Acknowledgements: This study was supported by grants from the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

Keywords: Head and neck squamous cell carcinoma, Radiotherapy, Thyroid dysfunction.

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DOES PET/CT WITH 18F-FLUOROESTRADIOL (18F-FES) CONTRIBUTE TO THE ASSESSMENT OF BREAST CANCER COMPARED TO FLUORINE-2-D-DEOXYGLUCOSE (18F-FDG)?

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Introduction/Justification: While fluorine-2-D-deoxyglucose (18F-FDG) PET/CT is commonly used in the assessment of breast cancer, it has limitations, such as its inability to distinguish it from inflammatory and infectious conditions. In this context, another molecular imaging tool, PET/CT with 18F-fluoroestradiol (18F-FES), is emerging as a promising alternative. Preliminary data from the literature already shows comparable sensitivity between these exams in breast cancer with estrogen receptors. In addition, the latter seems relevant because it correlates with the concentration of these receptors, shows their expression non-invasively and suggests a theoretical gain in specificity. **Objectives:** To evaluate whether 18F-FES PET/CT provides supplementary information to clinical reasoning when compared to 18F-FDG PET/CT in the assessment of breast cancer. **Materials and Methods:** A retrospective, observational, and comparative analysis was performed using information stored in the databases of a private institution regarding 18F-FES PET/CT scans performed in the context of breast cancer. The selection criteria required a complementary scan using 18F-FDG, which was met by thirteen out of the 14 tests found, however, one study was excluded from the analysis because its indication could not be precisely classified with the available data. **Results:** The twelve selected tests were carried out between August 2022 and March 2024, on females with a mean age of 62.16 years. The time interval between studies using positron-emitting radioisotopes (18F-FES and 18F-FDG) ranged from 1 to 29 days. The administered activity of 18F-FES varied from 4.0 to 10.0 mCi, and the interval between administration and image acquisition ranged from 45 to 130 minutes. Among the findings showing 18F-fluoroestradiol uptake, breast lesions and thoracic lymph nodes were the most common, present in six and five reports, respectively. The indications for the scans varied, with ten intended for staging/restaging and two