hospital. Currently feasibility and appropriateness of the model is evaluated. When finalised, we want to evaluate the implementation and efficiency of the program. Future plans include creating and recording appropriate oncogeriatric quality indicators and including a larger spectrum of malignancies.

**M22 The impact of different types of exercise training on blood BDNF concentrations in older adults: a meta-analysis**

Nastasia Marinus, Dominique Hansen, Peter Feys, Raf Meesen

**Purpose** Alzheimer's disease is associated with atrophy of the brain volume. Brain-derived neurotrophic factor (BDNF), a neurotrophin highly expressed in the hippocampus, has a protective effect on neuronal survival and maintenance in adulthood. Therefore, it plays an important role in preservation of brain function and size. The goal of this meta-analysis was to analyse the impact of aerobic and/or strength exercise training on BDNF concentrations in older adults (≥60 years).

**Methods** This meta-analysis was completed in accordance with the PRISMA protocol. Inclusion criteria were (i) studies with subjects (men and women) ≥ 60 years (ii) participation in a single exercise bout or an exercise program with (iii) measurements of blood BDNF; (iv) a comparison between (a) an intervention group and a control group or (b) two intervention groups, or (c) pre and post measurements of an exercise intervention without a control group. Studies with specific interest in known comorbidities such as diabetes, chronic pulmonary/cardiovascular diseases, musculoskeletal injuries or brain diseases affecting the peripheral and/or central nervous system, except for dementia, were excluded.

**Results** Blood BDNF concentrations increased significantly in the exercise versus control group, both after a single exercise bout (Z=2.21, P=0.03) as well as after an exercise intervention (Z=4.72, P<0.00001). However, the increase in BDNF was significant only after strength training (Z=2.94, P=0.003) and combined training (Z=3.03, P=0.002) but not after aerobic exercise training (Z=0.82, P=0.41).

**Conclusion** To increase blood BDNF concentrations in older adults, strength training and combined aerobic/strength training are preferred.

**M23 The use of opioids in the dying geriatric patient comparison between the acute geriatric ward and the palliative care unit**

Wim Janssens, Nele Van Den Noortgate, Ruth Piers

**Purpose** Little data concerning the use and dosage of opioids in the terminal phase in elderly, one of the commonest topics to achieve better symptom control in the dying patient, are available. The aim of this study is to describe the use of opioids in the terminal phase in older hospitalized patients, by comparing use and dosage of opioids in the terminal phase in elderly between the palliative care unit (PCU) and the acute geriatric unit (AGU).

**Methods** In this multi-centric retrospective study, we included patients 75 years and older who died on the AGU and the PCU in 3 hospitals (during a 2-years period). Sudden deaths were excluded. Demographic and clinical variables, and data concerning use and dosage of opioids in the last 72 hours before death were collected.

**Results** Data from 556 patients were collected (38.5% from PCU, 61.5% from AGU). After adjusting for the variables age, gender and underlying pathology, opioids seemed to be given more frequently (98.2% of patients on PCU received opioids, compared to 75.5% of patients on the AGU; OR 1.2; 95% CI 1.1-1.3; P < 0.001) and in a higher dosage on the PCU compared to the AGU (mean 88.2mg in 72 hours on PCU versus 27.7mg on AGU; B 34.2; 95% CI 15.0-53.4; P = 0.001).

**Conclusion** Opioids are more often and in a higher dosage used in older patients dying on the PCU compared to the AGU. Collaboration between PCU and AGU could enhance the quality of the prescription of opioids in geriatric patients.

**M24 Unusual “paraneoplastic” hypercalcemia in a geriatric patient**

Siddharta Lieten, Aziz Debain, Bert Bravenboer, Tony Mets

**Background** While moderate hypercalcemia is a common finding in geriatric patients, extreme values remain rare, presenting a medical emergency that can be difficult to treat and needs a careful analysis.

**Case report** A 78-year-old woman was referred with persistent common symptoms (falling, fatigue, anorexia, weight loss, dyspnea), and recent edema of the right leg. A biopsy of enlarged, right-sided inguinal lymph nodes revealed a diffuse large B-cell non-Hodgkin lymphoma, which had extended to the retroperitoneal and mediastinal regions, and to the neck (Lugano classification grade 4).

The calcium was 15mg/dL (3.75 mMol/L), with serum levels that were normal for creatinine, 25(OH)-Vitamin D, PTH, PTHrP; low for Ostase; and increased for 1,25(OH)2-Vitamin D (190 pMol/L; normal values 43-168).

Although the hypercalcemia disappeared after rehydration and repeated IV administration of Pamidronate, the general condition regressed and the patient deceased before systemic chemotherapy could be started.

**Discussion** Hypercalcemia due to primary hyperparat-