evaluated using the method of ultrasonic densitometry and DEXA at the beginning of treatment and 12 months. The CRP level was determined at the beginning of the observation and after 1, 3, 6, 9 and 12 months. The two groups were compared on the level of BMD, radiological grade, the level of CRP and WOMAC function after adjusting for significant covariates. Multiple regression analysis was used to identify the independent effects to each specific component for level of CRP on knee osteoarthritis parameters.

Results: One hundred forty women were included. The mean age was 55.28 $\pm$ 0.80³⁷⁻⁷⁵ years. Overweight had 86.42% of patients. The body mass index averaged 30.18 $\pm$ 0.43²³⁻³⁷ kg/m². According to Kellgren-Lawrence classification, 55% of patients had II and 45% of patients – III radiological stage of gonarthrosis. 55.7% of knee OA patients had reduced bone mineral density. Multiple regression analysis showed, after adjusting for significant covariates, that the CRP level was significantly higher ($p < 0.0001$) in patients with reduced BMD compared to normal (6.32 $\pm$ 1.67 mg/L and 4.74 $\pm$ 0.75 mg/L respectively), an average of 33, 3%.

Conclusions: It was found that in patients with gonarthrosis with reduced BMD, a higher level of CRP was observed at 33.3%, which was associated with a more severe course of the disease.

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- [1] It is recommended to study the severity of the progression and progression of OA to study the level of CRP and mineral density of bone tissue.

Disclosure of Interest: None declared

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AB0978

DECREASED PAIN AND IMPROVED DYNAMIC KNEE INSTABILITY MEDIATE THE BENEFICIAL EFFECT OF WEARING A SOFT KNEE BRACE ON ACTIVITY LIMITATIONS IN PERSONS WITH KNEE OSTEOARTHRITIS

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Background: We have previously shown that wearing a soft knee brace reduced activity limitations in persons with knee osteoarthritis (OA).¹ Several underlying mechanisms have been proposed via which a soft knee brace reduces activity limitations in persons with knee OA.² However, to our knowledge, no study has identified mechanisms explaining this effect.

Objectives: The aim of the study was to identify mechanisms explaining the beneficial effect of wearing a soft knee brace on activity limitations in persons with knee OA.

Methods: This was an exploratory analysis of data from 44 participants with knee OA from Amsterdam Osteoarthritis cohort, who enrolled in a single-session within-subject cross-over design study, comparing a soft brace with no soft brace, and comparing a non-tight soft brace with a tight soft brace (GENUTEX A2, Human I). A mediation analysis was performed and the mediation effect was calculated based on the product of coefficients approach. Confidence intervals were calculated with a bootstrap procedure. The outcome measures were activity limitations assessed with the 10-metre walk test and the Get up and Go test. The studied mediators were the changes in: knee joint proprioception, pain, pressure pain threshold (PPT) and objective dynamic knee instability. Knee joint proprioception was assessed by the active movement extent discrimination assessment; pain with the Numeric Rating Scale (NRS); PPT with a hand-held pressure algometer, and dynamic knee instability with the Perturbation Response i.e. a measure reflecting deviation in the mean knee varus-valgus angle after a controlled mechanical perturbation on the treadmill, in respect to level walking.

Results: Both a decrease in pain during walking and a decrease in dynamic knee instability mediated the association between wearing a soft knee brace and reduction in time to complete both 10 m walk test and the GUG test ($p < 0.05$). Changes in proprioception and PPT did not mediate these associations ($p > 0.05$). Magnitudes of the mediation effects were similar for a non-tight and a tight soft knee brace.

Conclusions: The decrease in activity limitations in persons with knee OA who wear a soft knee brace might be explained by a decrease in self-reported pain and a reduction in dynamic knee instability.

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AB0979

ULTRASOUND-MEASURED RADIAL DISPLACEMENT OF THE MEDIAL MENISCUS AS AN INDIRECT SIGN OF MRI-DETECTED CARTILAGE DAMAGE IN PATIENTS WITH MEDIAL TIBIOFEMORAL OSTEOARTHRITIS

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Background: Extrusion of the medial meniscus is a consequence of the complex interactions among joint structures and altered tissue mechanics involved in the osteoarthritis (OA) process.¹ Potential contributing factors are cartilage loss, meniscal tears, obesity and knee malalignment²⁻⁴ – features strongly associated with knee OA. Ultrasound (US) measurement of medial meniscus radial displacement (MRD) is an easy to implement procedure that may serve as a starting point for assessment of the cartilage loss in patients with knee osteoarthritis.

Objectives: The aim of the study was to investigate the correlation between ultrasound-measured MRD and magnetic resonance imaging (MRI)-detected cartilage damage, as a referent method, in patients with medial femorotibial knee OA

Methods: 60 osteoarthritic knees of 48 patients (83% female) aged 40 to 80 years, meeting the ACR criteria for knee osteoarthritis, were included in the study. Patients with severe malalignment (varus or valgus deformity ≥ 20 degrees) were excluded. Radiographic stage was assessed according to the Kellgren-Lawrence (KL) grading system, as only KL I-III knees were included. MRD was measured in millimetres using diagnostic US with patients in the supine (non-weight-bearing) position. Magnetic resonance images were acquired by using 1.5 T MRI and were evaluated by a trained radiologist using Whole-Organ Magnetic Resonance Imaging Score (WORMS) for cartilage abnormalities of the medial femorotibial joint (MFTJ) and medial meniscal tears.

Results: There was a significant difference in values of MRD among studied radiographic groups ($p < 0.001$). The mean (SD) levels of MRD were 2.70 (1.43) mm, 3.97 (1.25) mm and 6.03 (1.30) mm for KLI, KLII, and KLIII, respectively. All knees that were KLII/KLIII ($n=41$) had MRD higher than 1.8 mm (range 1.8–8.7 mm). MRD correlated significantly and positively with WORMS grades for cartilage abnormalities of MFTJ ($p < 0.001$, $r=0.758$), WORMS grades for medial meniscal tears ($p < 0.001$, $r=0.576$), and body mass index (BMI) ($p=0.011$, $r=0.315$). Correlation between MRD and MRI-detected cartilage damage remained significant after adjustment for age, BMI and medial meniscal tears score.

Conclusions: Joint space narrowing (KL > 2) on radiography is associated with higher level of meniscal extrusion. Higher values of measured MRD by ultrasound may be indicative of greater cartilage damage of MFTJ.

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AB0980

FACTORS ASSOCIATED WITH LOSS OF CARTILAGE IN KNEE OSTEOARTHRITIS

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Background: Osteoarthritis (OA) is one of the leading causes of pain and disability worldwide. The structural changes in knee OA are characterised mainly by the progressive loss of cartilage, which is associated with additional structural changes such as subchondral bone lesions and alterations in the menisci. Unfortunately, these changes cannot be effectively treated conservatively. Further determination of modifiable risk factors of cartilage loss is extremely important for improvement of OA management.

Objectives: The main objective of the study was the determination of factors associated with loss of cartilage in knee OA.

Methods: 294 patients (277 female, 17 male, mean age 55, 09±8,56 years) with newly diagnosed mild to moderate primary knee osteoarthritis were investigated. X-ray and ultrasound examinations of knee joints were performed. The thickness of cartilage and synovial layer, as well as presence of synovitis, tendinitis, osteophytes, Baker's cysts, tear of meniscus were determined. For determination of factors associated with loss of cartilage both univariate and multivariate analyses were performed. The data is introduced as odds ratios (OR) with 95% confidence interval (CI). The results were considered significant when $p < 0.05$.

Results: Expressed thinning of cartilage (≤ 2 mm) was observed in 216 (73,5%) patients, abnormal thickening of synovial layer (≥ 3 mm) – in 76 (25,9%), synovitis – in 88 (29,9%), tendinitis – in 38 (12,9%), osteophytes – in 273 (92,9%), Baker's cysts – in 93 (31,6%), tears of meniscus – in 93 (31,6%) patients.

Univariate analysis had shown that loss of cartilage (≤ 2 mm) was significantly ($p < 0.05$) associated with age > 55 (OR/95% CI=2,0/1,3–3,4/, $p < 0.05$), thickening of synovial layer (OR/95% CI=2,9/1,5–6,2/, $p < 0.01$), synovitis (OR/95% CI=2,6/1,3–5,0/, $p < 0.01$) and osteophytes (OR/95% CI=14,8/4,8–45,5/, $p < 0.01$). Following factors were then stepwise included in the model of multivariate logistic regression: age > 55 , thickening of synovial layer and osteophytosis. According to results of analysis, age > 55 had lost its significance, was evaluated as confounding factor (OR/95% CI=1,2/0,7–2,2/, $p = 0.4$) and excluded from the model. Finally, loss of cartilage (thickness ≤ 2 mm) was found to be significantly and independently associated with abnormal thickening of synovial layer (OR/95% CI=2,8/1,3–6,0/, $p < 0.05$) and osteophytosis (OR/95% CI=12,8/3,9–41,6/, $p < 0.01$).

Conclusions: A positive association of cartilage loss with abnormal thickening of synovial layer (with further development of synovitis) and presence of osteophytes was determined. While cartilage loss and meniscal damage are not yet clearly treatable, treatments targeting inflammation within the joint are available. Thereby, forehanded treatment of secondary inflammatory conditions of joint, as well as strategies, directed toward dissection of osteophytes, can decrease cartilage loss and structural damage in OA.

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AB0981

PRIORITIES FOR OSTEOARTHRITIS RESEARCH SHOULD BE DONE IN CHINA

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Background: Osteoarthritis(OA) exacts a tremendous toll on patients and society due to limited treatment options and unclear pathological mechanism. Furthermore, rising rates of obese and senior population are predicted to increase the prevalence of OA in the coming years in China. With the development of economy, Chinese government increasingly encourage researches for prevention and treatment of chronic diseases including OA. However, the studies of OA in China remain inadequate.

Objectives: This study was designed, in collaboration with Chinese rheumatologists, to investigate key priorities for OA in the next five years to make use of limited funding and resource in China. In addition, it will also help researchers, especially Chinese rheumatologists, to get more support from the government, which will push OA studies faster towards elusive breakthroughs. Therefore, it will improve prognosis and health and quality of life for OA patients.

Methods: The study comprised 4 stages, including 1) Identify research priorities for the next five years that match the strengths and expertise of Chinese OA

researchers at the OA potential priority-setting summit. 2) Initial ranking of suggested research priorities using 1000Minds software prior to the summit. 3) Discussion and selection of top five thematic priorities from the original list of 10 priorities at the final OA priority-setting summit. 4) Final ranking of five research priorities by all attendees at the summit and design experimental aims and approaches for the priorities. Finally, the top three priorities from five prioritised topics were selected.

Results: 39 Chinese rheumatologists attended stage one and identified 10 priorities in the next five years. There were 313 Chinese rheumatologists invited to participate in stage two, among them, 104 rheumatologists finished the process and identified the initial prioritised rankings of the research topics. 29 Chinese rheumatologists attended the final OA priority-setting summit. Through these multistage processes, three key topics about OA were identified as essential and were prioritised. These three priorities include targeting inflammation should be a focus of research in osteoarthritis, seeking biomarkers for osteoarthritis diagnosis and monitoring, research into early OA would be expected to understand OA across disease development and translate to better therapy. Experimental aims included to detect inflammatory in OA pathology, to identify well-established criteria for early OA, to protect and repair chondrocytes and cartilage, and the approaches included longitudinal study, placebo-controlled randomised controlled trial, animal experiments.

Conclusions: Chinese rheumatologists identified OA priorities for the first time, and these key topics would have guiding effect significantly on Chinese OA research in the future.

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AB0982

PREVALENCE OF OSTEOARTHRITIS IN HIGH ALTITUDE AREA OF TIBET

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Background: Osteoarthritis is a degenerative joint disease; the specific etiology and pathogenesis are unclear. The prevalence of osteoarthritis of subtypes of joints is different, whereas the most common osteoarthritis occurs in knees. In China, the prevalence of osteoarthritis is about 15%, the prevalence of the patients over 40 years old is 10%~17%, and 50% over the age of 60, while over 75 years old was as high as 80%. Few data exist regarding the prevalence of OA in plateau in China.

Objectives: To investigate the prevalence of osteoarthritis(OA) in Jiuhe village, which is located about 3.5 kilometres high of Qonggyai County of Tibet and the associated factors in order to provide the guidance for the prevention and treatment of OA.

Methods: The participants in this analysis were all the resident people aged 50 years and above in Jiuhe village, Qonggyai County of Tibet. All subjects were invited to completed a questionnaire, physical examination and radiographic examination. The questionnaire included sex, age, body mass index(BMI) and dietary habit.

Results: A total of 136 participants aged 50–86 years were enrolled, including 47 males with mean age of 62.00±9.11 years, and 89 females with mean age of 61.30±9.52 years. Altogether 102 knee OA can be diagnosed, the total prevalence of knee OA was 75.00%. Knee OA occurred in 78.72% of male and 73.03% of female. The prevalence of knee OA combined with hand OA was 19.12%, and 21.28% for male and 17.98% for female. The prevalence of knee OA combined with hand OA increased with age in the female, no such trend was observed in male or in only knee OA patients. No significant difference was found about sex, BMI, drinking between the OA patients and the controls.

Conclusions: The prevalence of osteoarthritis in Jiuhe village, plateau of Tibet was significantly high. The prevalence in male is higher than that in female. The prevalence of knee OA combined with hand OA increased with age in the female.

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AB0983

HYALURONAN DERIVATIVE HYMOVIS® INCREASES CARTILAGE VOLUME AND TYPE II COLLAGEN TURNOVER IN OSTEOARTHRITIC KNEE: DATA FROM MOKHA STUDY

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Background: Intra-articular injections of hyaluronan represent one of the well-accepted standard of care for treating symptomatic knee osteoarthritis (OA). Until now, not much is known about the structural-modifying effect of this treatment justifying this pilot study.

Objectives: This exploratory non-controlled study aims to study effects of HYMOVIS on imaging, biological and clinical variables.

Methods: Forty six patients with symptomatic knee OA (mean age 61.4 years [min.35-max.80; 67.4% female; Kellgren and Lawrence grade II and III (63% and 37%, respectively); mean BMI 30.6 kg/m²) were enrolled in this open-label, prospective, multicenter, pilot study. Patients received two treatment cycles of intra-articular injections (3 mL) of Hymovis (8 mg/mL of the 500–730 kDa hyaluronic acid hexadecylamide) at 6 months interval. Each treatment cycle corresponded to two intra-articular injections one week apart. All patients had MRI of the target knee at baseline and 1 year, and blood samples (D30, D90, D180, D210 and D360) to assess joint biomarkers. The primary outcome was the change in type II collagen-specific biomarkers (Coll2-1, Coll2-1NO2 and CTX-II) after Hymovis treatment versus baseline. Secondary endpoints included levels changes in AGG, COMP, PIINP, MMP-3, MPO and IL-6 serum biomarkers, the ratio Coll2-1/PIINP, CTX-II/PIINP, MRI cartilage volume and KOOS index.

Results: Coll2-1 serum levels significantly increased overtime (0.05<P<0.001) while Coll2-1NO2 levels was only increased at D360 (p<0.05). Serum PIINP levels also progressively and significantly enhanced with time (p<0.001). In contrast, other serum biomarker levels including CTX-II, AGG, COMP, MMP-3, MPO or IL-6 did not change significantly overtime. Interestingly, the ratios Coll2-1/PIINP and CTX-II/PIINP decreased (p<0.005), indicating a decrease of cartilage catabolism. Compared to baseline value, MRI cartilage volume increased in lateral femoral and lateral trochlea compartments (p<0.05) and not in medial compartment. Interestingly, WOMBS effusion score, an indicator of synovitis, significantly decreased (p<0.016). Finally, global KOOS score and subscales significantly increased overtime (p<0.001) while pain at rest, walking pain and patients or investigators global assessment of disease activity decreased (p<0.001). The safety profile was favourable with a low incidence of injection-site pain.

Conclusions: Hymovis, a well-tolerated intra-articular treatment, significantly enhanced type II collagen turnover as suggested by the increase in Coll2-1 and PIINP levels and cartilage volume observed by MRI in lateral knee compartment. Importantly, this study highlighted the potential symptomatic benefit of Hymovis on pain and function and provides critical information for the design of a larger phase III clinical trial.

Disclosure of Interest: None declared

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AB0984

CADMIUM TOXICITY AS A PROBABLE CAUSE OF SMOKING INDUCED BONE LOSS

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Background: Cigarette smoking supposed to be a risk factor for osteoporosis. There is an inverse relationship between smoking and both bone mass and fracture risk. Tobacco smoking is the most important single source of cadmium exposure in the general population. The absorption of cadmium from the lungs is much more effective than that from the gut.

Objectives: This study was designed to evaluate the effect of cigarette smoking on bone mineral density, due to cadmium toxicity.

Methods: this study was carried on 100 persons, selected from AL-Azhar university hospital and divided into three groups: group I: included 40 persons with active smokers; group II: included 40 persons with passive smokers and group III included 20 nonsmokers. All persons were subjected to full history taking,

thorough clinical examination, routine lab tests, serum and urinary cadmium and lead, and bone mineral density was measured by DEXA.

Results: Serum and urinary cadmium and lead were statistically significantly higher in group I in comparison to groups II or III and in group II in comparison to group III. Also, there was statistically significant decrease of BMD in group I in comparison to either group II or group III and in group II in comparison to group III. There was an inverse statistically significant correlation between serum and urinary cadmium and bone mineral density.

Abstract AB0984 – Table 1. Comparison between studied groups as regard serum and urinary cadmium levels

		Mean	S. D	Minimum	Maximum	F	P
Serum cadmium (µg/l)	Group I	0.449	0.287	0.18	1.80	27.92	<0.001(S)
	Group II	0.232*	0.040	0.16	0.32		
	Group III	0.094*	0.047	0.01	0.16		
Urinary cadmium (µg/l)	Group I	0.555	0.304	0.30	2.00	27.16	<0.001(S)
	Group II	0.335*	0.042	0.26	0.42		
	Group III	0.181*	0.052	0.11	0.26		

*=statistically significant decrease in comparison to group I or group II

#=statistically significant decrease in comparison to group I

Conclusions: Results of the present study revealed that: there are harmful effects of smoking on the bone mineral density and it may be occurred by direct (increased blood and urinary levels of both cadmium and lead) or indirect effects (effects of both renal and liver functions) of cadmium and lead.

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AB0985

PERSISTENCE AND ADVERSE EVENTS IN PATIENTS TREATED WITH DENOSUMAB

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Background: Denosumab (DNS) is a human monoclonal antibody directed against RANKL, which blocks the maturation of the osteoclast, inhibiting bone resorption. The binding of DNS to RANKL suppresses bone resorption mediated by osteoclasts and decreases bone turnover.

Objectives: To evaluate the survival rate of DNS, adverse events and reasons for the DNS discontinuation.

Methods: This was a prospective observation study in patients with OP which initiated treatment with DNS between January 2013 and December 2017. Patients included were followed up in the Rheumatology Nurse Clinic every six months. Demographics data, disease features, concomitant disease and treatments, adverse events and reasons for discontinuation were collected.

Results: We included 220 patients (80.5% women) with a mean age (range, SD) of 67.19 (30–89, 11.2) years. In average (range, SD), patients received 3.85 (1–11, 2.2) doses of DNS, with a mean duration of treatment (range, SD) of 23.03 (6–66, 13.3) months. 191 (86.8%) patients received also treatment with calcium and vitamin D supplements. Before the start of the treatment with DNS, 123 (55.9%) patients had received another specific treatment for OP with mean previous treatment duration of 51.6 months. Previous fragility fractures were reported in 150 (68.1%) patients, of whom 91 (41.3%) patients had two or more fractures before starting treatment with DNS.

Of all included the patients, 108 (49%) patients had an inflammatory autoimmune disease (IAD) diagnosed. In addition, 100 (45.4%) patients had concomitant biological and/or synthetic treatment and 77 (35%) patients received concomitant treatment with corticosteroids.

During the treatment with DNS, 30 (13.6%) patients had new fractures, 5 (2.3%) patients had 2 fractures. Eleven fractures were vertebral, 3 of femur, one of radius and 21 other locations. There were no differences between patients with or without glucocorticoid treatment (0.234).

The most frequent adverse events (AE) were infections in 88 (40%) patients, muscle pain in 15 (0.6%) patients, fatigue in 7 (0.31%) patients, itching, heat and fever in 2 (0.9%) patients and osteonecrosis of the jaw in 2 (0.9%) patients. The 2 patients with osteonecrosis of the jaw had previous treatment with bisphosphonates for more than 24 months.

At 60 months, 185 (84.1%) patients continued with DNS. In 37 (1.6%) patients, DNS was discontinued; in 4 patients DNS was restarted. The reasons for suspension were hypercalciuria 1 (0.04%), hypocalcemia 1 (0.04%), local hypersensitivity reactions 4 (0.18%), normalisation of BMD 5 (0.2%), dental problems 11 (0.4%) and others 17 (0.7%). The mean (SD, 95% CI) of DNS survival was 51.2 (1.9; 47.3–55.1) months. There are no differences in the survival rates of DNS between patients with and without concomitant biologic therapy ($p=0.995$).

Conclusions: The majority of patients who started treatment with DNS continue the treatment with good tolerance. The most frequent adverse effects were infections but they have not led to suspension of treatment.

Disclosure of Interest: None declared

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AB0986

MANAGEMENT OF OSTEOPOROSIS AFTER MAJOR FRACTURE IN A COHORT OF WOMEN AGED OVER 50 IN A REAL LIFE SETTING

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Background: Osteoporosis is the most common metabolic bone disease. Fractures constitute a major health concern because prior fractures are associated with an increased risk of subsequent fracture. Moreover, osteoporotic fractures have been associated with increased mortality risk.¹ Hence secondary fracture prevention is recommended. Anti-osteoporotic drugs are available, but in the last decade an alarming decrease of anti-osteoporotic therapy use was observed.²

Objectives: The objective of this study was to analyse the management of osteoporosis after major fracture (hip, vertebral and humerus fractures) in women aged over 50 in a real life setting.

Methods: We conducted an observational study on all women over 50 years of age who experienced a major fracture at Nîmes University Hospital in 2015 identified by informatic codes. Only fragility fractures were included. Data collected prospectively in the computerised medical files were extracted: prescription of a postmenopausal osteoporosis therapy; therapy initiation; prescription and completion of generalised bone mineral density testing; and prescription and completion of blood sample tests to look for secondary osteoporosis. We also recorded the department in which the hospitalizations occurred and the fracture localization.

Results: Of 375 women over 50 with a registered fracture in 2015, 264 were included. The exclusion criteria were women with traumatic fracture or minor

osteoporotic fracture. The median age was 84 years old. The most common major fractures were hip (52.3%), humerus (20.8%) and spine (18.9%).

Forty-five (17.0%) patients had experienced a fracture prior to the 2015 fracture. Only 12 patients (4.5%; IC95%[2.4–7.8]) had an anti-osteoporotic drug prescription at the end of the hospitalisation and only 45 women (17%) had anti-osteoporotic drug prescription planned later. The median period until anticipated prescription was 9 days and the median period until prescription in practice was 18 days.

Assessment of bone mineral density was planned later in only 23 patients (8.7%; IC95% [5.6–12.8]). Blood sample tests were realised in 49 women (18.6%; IC95% [14.1–23.8]).

In surgical department, anti-osteoporotic drug prescription was planned in only 3 women (1.5%) compared with 40 women (56.3%) in medical departments.

Conclusions: A large majority of women with osteoporotic major fracture are not receiving appropriate therapy and recommended management in 2015 in Nîmes University Hospital. The rate is dependent on the department in which patients are hospitalised.

The results of our study highlight the urgent need for optimisation of osteoporotic fracture management, especially in the surgical department.

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FREQUENCY OF UTILISATION OF THE CENTRAL DXA BONE DENSITOMETRY IN PATIENTS WITH MULTIPLE SCLEROSIS

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Background: Multiple sclerosis patients can have a higher risk from occurrence of osteoporosis. Reduced bone mass density can be related to a cumulative effect of different factors, most common ones being physical inactivity, reduced intake of vitamin D and use of medications such as glucocorticoids.

Objectives: The aim of this research was to explore the level of awareness in patients and physicians on the significance of the utilisation of DXA bone densitometry in patients with multiple sclerosis.

Methods: The observational analytical cross-section study included 366 multiple sclerosis patients on stationary treatment at the Special rehabilitation hospital "Banja Kanjiža" in Kanjiža in the period between 2013 and 2017. The following parameters were observed in patients: sex, age, duration and form of basic disease, the level on the Kurtzke Expanded Disability Status Scale, utilisation of glucocorticoids, occurrence of pathological fractures and intake of vitamin D, i.e. of medication for the treatment of osteoporosis in order to determine their impact on the frequency of the low bone mineral density (BMD). Statistical data processing and analysis was conducted in the SPSS ver 20.0 program by IBM corporation.

Results: In the period in question, an average of 128 multiple sclerosis patients were treated, out of those 62.3% ($n=228$) with relapsing-remitting type of disease, and $n=366$ first time patients. Within the given period, 36% more women than men were rehabilitated ($f=249$ vs. $m=117$). During the five-year long period of observation of said patients, only 8.5% ($n=31$) of patients with different levels of bone metabolic disorders established underwent central DXA bone densitometry. Pathological fracture on a small trauma was suffered in 6.8% ($n=25$) patients. Of the abovementioned parameters, only the female sex ($X^2=84.492$; $p<0.001$) and age ($t=2.100$; $p=0.036$) statistically significantly influenced the occurrence of low bone mineral density.

Conclusions: It is necessary to increase the level of health education of multiple sclerosis patients on the consequences of low bone mineral density. The highest risk of osteoporotic fracture is in older women suffering from multiple sclerosis.

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