mean difference in the PCS of -3.9 (-6.7 ; -1.2), but no difference in mental HRQoL, compared with participants with hand OA that have not reported consulting secondary care for OA (table 2). In patients with only hand OA from the outpatient clinic, the PCS (-3.5), bodily pain (-4.9), vitality (-2.5) and role functioning – physical (-2.2) scales were clinically relevantly reduced, but mental HRQoL was not affected.

Table 1. Health-related quality of life of hand osteoarthritis patients in the general population

	NEO n = 6,334		Mean difference (95% CI)
	No hand OA 78%	Hand OA 22%	
Physical component score	55.1 (7.6)	52.0 (8.7)	-2.4 (-3.6; -1.3)
General health	53.8 (8.1)	52.1 (8.6)	-1.5 (-2.6; -0.3)
Bodily pain	55.3 (8.4)	51.5 (8.9)	-3.4 (-4.6; -2.2)
Vitality	51.0 (8.8)	50.6 (8.6)	-0.4 (-1.6; 0.5)
Physical functioning	55.0 (7.0)	51.8 (8.0)	-2.1 (-3.0; -1.1)
Role functioning - physical	53.9 (7.6)	52.6 (8.8)	-0.9 (-2.0; 0.2)
Mental component score	51.1 (8.8)	51.3 (8.9)	0.2 (-1.0; 1.3)
Mental health	52.4 (7.8)	51.3 (7.8)	-0.8 (-1.7; 0.2)
Social functioning	52.6 (8.0)	51.6 (8.4)	-0.6 (-1.7; 0.4)
Role functioning - emotional	52.7 (8.0)	52.3 (8.6)	-0.2 (-1.3; 0.8)

Higher SF-36 scores represent a better HRQoL. Numbers represent mean (SD). Results are adjusted for age, sex, BMI, education and ethnicity. CI = confidence interval

Table 2. Health-related quality of life of hand osteoarthritis patients in secondary care

	NEO n = 6,334		Mean difference (95% CI)	HOSTAS n = 538		Δ
	Hand OA spec ⁺ 6.6%	Hand OA spec ⁻ 1.0%		Hand OA 57%		
Physical component score	52.6 (8.4)	48.5 (9.4)	-3.9 (-6.7; -1.2)	46.5 (8.1)	-3.5	
General health	52.5 (8.3)	49.5 (10.0)	-2.6 (-6.2; 0.9)	49.2 (6.3)	-0.8	
Bodily pain	52.2 (8.8)	47.5 (8.9)	-4.9 (-7.6; -2.1)	45.1 (7.7)	-4.9	
Vitality	50.7 (8.7)	50.2 (8.1)	-0.6 (-3.2; 1.9)	47.5 (8.8)	-2.5	
Physical functioning	52.5 (7.6)	47.9 (9.5)	-4.3 (-7.0; -1.7)	48.8 (9.4)	-1.2	
Role functioning - physical	52.9 (8.6)	50.7 (9.9)	-2.1 (-5.0; 0.8)	47.8 (10.2)	-2.2	
Mental component score	51.3 (8.5)	50.9 (11.3)	-0.6 (-5.0; 3.8)	51.7 (8.8)	1.7	
Mental health	51.5 (7.4)	50.1 (9.8)	-1.5 (-5.2; 2.1)	51.0 (8.3)	1.0	
Social functioning	51.8 (8.2)	50.4 (9.6)	-1.4 (-4.8; 2.0)	50.0 (9.1)	0	
Role functioning - emotional	52.6 (8.2)	50.0 (10.8)	-2.5 (-6.3; 1.3)	51.1 (9.5)	1.1	

Higher SF-36 scores represent a better HRQoL. Numbers represent mean (SD). Results are adjusted for age, sex, BMI, education and ethnicity. In HOSTAS the delta (Δ) between population scores and norm scores were calculated. CI = confidence interval

Conclusion: Participants with hand OA from the general population had a clinically relevant lower physical HRQoL, but not mental HRQoL. Physical HRQoL was further reduced in patients consulting secondary care and in co-occurrence with knee OA. Hence, patients with hand OA in secondary care experience more impact on physical HRQoL than patients in the general population.

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OP0177

ASSOCIATION BETWEEN METABOLIC SYNDROME AND KNEE STRUCTURAL CHANGE ON MRI: A 10.7-YEAR FOLLOW-UP STUDY

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Background: Metabolic syndrome (MetS) has been suggested a crucial role in the pathophysiology of osteoarthritis (OA); however, currently none of studies have examined the associations between MetS and structural changes on MRI.

Objectives: To describe the associations between MetS and its components and structural changes on MRI including knee cartilage volume (CV) loss and bone marrow lesion (BML) change over 10.7 years.

Methods: Longitudinal data on 435 participants (mean age 61 years, 50% of females) from a population-based cohort study were analysed. Blood pressure, glucose, triglycerides, and high-density lipoprotein (HDL) were collected. MetS was defined based on the National Cholesterol Education Program-Adult Treatment Panel III criteria. MRI of the right knee was performed to measure CV and BML. Radiographic knee osteoarthritis (ROA) was assessed by X-ray.

Results: 32% of participants had MetS and 60% had ROA. In multivariable analysis, the following were independently associated with medial tibial CV loss [MetS: $\beta = -0.30\%$; central obesity: $\beta = -0.26\%$; low HDL: $\beta = -0.26\%$ per annum]. MetS, hypertriglyceridemia and low HDL were also associated with higher risk of BML size increase in the medial compartment [MetS: relative risk (RR) 1.72, 95%CI 1.22-2.43; Hypertriglyceridemia: RR 1.43, 95%CI 1.01-2.02; low HDL: RR 1.67, 95%CI 1.18-2.36]. After further adjustment for central obesity, MetS and low HDL remained significant with both medial tibial CV loss and BML size increase. The number of components of MetS correlated with greater CV loss and BML size

increase (both P for trend <0.05). There were no statistically significant associations in the lateral compartment.

Conclusion: MetS and low HDL are associated with medial compartment CV loss and BML worsening, suggesting that targeting MetS has the potential to prevent or slow structural change in knee osteoarthritis.

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OP0178

CARDIOVASCULAR COMORBIDITIES HAVE A DELETERIOUS IMPACT ON KNEE OSTEOARTHRITIS PROGNOSIS AT 5 YEARS: DATA FROM THE PROSPECTIVE KHOALA COHORT

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Background: The long-term effect of comorbidities on progression of structural changes in osteoarthritis (OA) remains poorly understood. Patients with knee OA have been reported to be at increased risk of several comorbidities including cardiovascular diseases (CVD). Nevertheless, the impact of all comorbidities on structural progression and on arthroplasty, not only in knee but also in hip OA, should be further defined.

Objectives: The objective of our study was to explore the relationship between comorbidities and the progression of structural changes in symptomatic knee and/or hip OA patients over 5 years.

Methods: The KHOALA (Knee and Hip OsteoArthritis Long-term Assessment) cohort is a French prospective multicenter observational cohort that included 878 subjects, aged 40 to 75 years, with symptomatic hip and/or knee OA at baseline (Kellgren and Lawrence (KL) ≥ 2). The structural progression was defined by the increase of one point of KL ($\Delta KL \geq 1$) or incidence of total knee or hip replacement at 5 years. Various comorbidities were analyzed: cardiovascular diseases excluding hypertension (coronary artery disease, heart failure, stroke, lower limb arteriopathy), hypertension, diabetes, smoking, dyslipidemia, metabolic syndrome, osteoporosis, neurological (e.g. Parkinson's disease, dementia), digestive (e.g. gastroesophageal reflux disease, ulcer), pulmonary (e.g. asthma, COPD), and psychiatric (depression, anxiety) diseases. Multivariate analysis was performed separately in hip and knee OA adjusted on age, sex and body mass index (BMI). Subjects with a BMI > 30 kg/m² were excluded from the analysis given the close relationship between obesity and the different comorbidities analyzed. Subjects with KL = 4 at the time of inclusion were also excluded from the analysis.

Results: Data from 631 non-obese subjects (BMI < 30 kg/m²) were analyzed. At 5 years, cardiovascular diseases were significantly associated with the 5-year KL change in knee OA (OR = 2.6 [1.13-5.76], $p = 0.02$) and with knee arthroplasty (OR = 3.4 [1.1-11.2], $p = 0.04$). Such associations were not found at the hip. Other comorbidities had no significant impact on knee OA structural progression. No significant relationship was found between any type of comorbidities and hip OA structural progression.

Conclusion: This 5-year data analysis of the KHOALA cohort revealed a significant association between cardiovascular comorbidities and structural progression of knee OA in subjects without obesity (BMI < 30 kg/m²). Other types of comorbidities do not appear to influence the structural prognosis of OA. These results argue for an integrated management of cardiovascular comorbidities in knee OA patients and highlight the differences between hip and knee OA.

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