1 Hz. Subjects reported pain on first, fifth and tenth touch. Enhanced TS is a marker of central sensitisation and we defined the magnitude of TS as TS-Δ: high-est pain value of fifth or tenth touch minus the first pain value.

We analysed whether sum scores of KL (0–128), GS (0–90), PD (0–30), number of erosive interphalangeal joints (0–20) and symptom duration were associated with TS-Δ using separate models of linear regression with adjustments for age, sex and BMI.

Results: Median radiographic KL sum score was 28 (IQR 15, 44) and ultrasound sum scores (GS, PD) were 3 (IQR 1, 7) and 0 (IQR 0, 1), respectively. Median number of erosive joints was 0 (IQR 0, 1) and symptom duration was 6 (IQR 3, 13) years. Median TS-Δ among the participants was 1 (IQR 0, 2).

Neither KL sum score ($p=0.18$), GS-synovitis sum score ($p=0.18$), PD sum score ($p=0.86$), number of joints with erosive HOA ($p=0.078$) nor symptom duration ($p=0.21$) were associated with TS-Δ (table 1).

Table 1 Associations between OA features and temporal summation *

Associations between OA features and temporal summation *		
	Unstandardized beta (95% CI)	P-value
Symptom duration in years	0.015 (-0.01, 0.04)	0.21
Kellgren-Lawrence sum score	0.007 (-0.00, 0.02)	0.18
Grey scale synovitis sum score	-0.001 (-0.03, 0.03)	0.96
Power Doppler sum score	0.001 (-0.05, 0.06)	0.86
Number of erosive joints	0.070 (-0.01, 0.15)	0.08

*Adjusted for sex, age and BMI.

Conclusions: We found no relationship between the severity of HOA pathology and CS. This is in line with the hypothesis that factors other than OA disease severity itself contribute to CS associated pain, and that CS may be a trait in some individuals. However, it does not exclude other aspects of HOA as an initiator of CS in a subgroup of patients.

Disclosure of Interest: None declared

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FRI0525

ASSOCIATION BETWEEN DIETARY VITAMIN K INTAKE WITH KNEE SYMPTOMS AND BACK PAIN IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Vitamin K could be implicated in structural change of osteoarthritis (OA), but current evidence is limited or conflicting so the association between vitamin K and OA symptoms remains unclear.

Objectives: This study aims to investigate the association of vitamin K intake with knee symptoms and structural features in people with knee OA.

Methods: The parent study, Vitamin D Effect on Osteoarthritis (VIDEO) study, was conducted between June 2010 and December 2013 in Tasmania and Victoria, Australia. Knee symptoms were assessed using the Western Ontario and McMaster University Index of osteoarthritis (WOMAC) and a Visual Analogue Scale (VAS) for pain. A validated Food Frequency Questionnaire (FFQ) (developed by the Cancer Council Victoria in Australia) was completed at baseline and used to determine dietary vitamin K intake. Knee Magnetic Resonance Imaging (MRI) scans were obtained according to a standardised protocol using a 1.5 T whole-body MRI unit. Cartilage volume, cartilage defects, bone marrow lesions and effusion volume were measured. The associations between vitamin K intake quartile and changes in clinical or MRI features were analysed using linear regressions.

Results: 261 participants were included at baseline and 213 completed 2 years of follow-up. There were no significant differences between two equal divisions with high or low level of vitamin K intake in term of baseline characteristics. As table 1 and figure 1 show, higher vitamin K intake quartiles were significantly associated with greater decrease in total WOMAC score and WOMAC function score over 24 months. Similar trends were seen in WOMAC pain score and stiffness score, though not statistically significant. There were no significant associations

between baseline vitamin K intake and changes in total cartilage volume, cartilage defects, bone marrow lesions and effusion volume over 24 months.

Abstract FRI0525 – Table 1. Associations between vitamin K intake quartile and changes in clinical symptoms over 24 months

		Value of change, Mean (SD)	Multivariable*,β (95% CI)	P value	P for trend
Total WOMAC Score	Vitamin K intake quartile 1	-112.9 (327.7)	Reference:		0.046
	Vitamin K intake quartile 2	-130.0 (482.6)	-3.6 (-165.3,158.1)	0.97	
	Vitamin K intake quartile 3	-270.6 (403.3)	-149.8 (-313.8,14.2)	0.07	
	Vitamin K intake quartile 4	-234.4 (415.5)	-122.4 (-281.3,36.5)	0.13	
WOMAC Pain Score	Vitamin K intake quartile 1	-30.4 (81.8)	Reference:		0.33
	Vitamin K intake quartile 2	-32.9 (115.5)	3.3 (-37.3,43.8)	0.87	
	Vitamin K intake quartile 3	-74.8 (103.1)	-41.1 (-82.1,-0.22)	0.05	
	Vitamin K intake quartile 4	-39.7 (107.5)	-7.5 (-47.2,32.1)	0.71	
WOMAC Function Score	Vitamin K intake quartile 1	-71.4 (241.2)	Reference:		0.03
	Vitamin K intake quartile 2	-82.8 (339.4)	-5.7 (-120.3,108.8)	0.92	
	Vitamin K intake quartile 3	-168.7 (275.2)	-94.7 (-210.9,21.5)	0.11	
	Vitamin K intake quartile 4	-172.5 (301.8)	-104.1 (-216.6,8.5)	0.07	

*Adjusted for age, sex, BMI and vitamin D intervention group

P values were from analyses after adjustment for age, sex, BMI and vitamin D intervention group
*: $p<0.05$ compare with the first quartile. **: $p<0.01$ compare with the first quartile.

Figure 1 Change in WOMAC score over 24 months among those with different vitamin K intake quartiles

Conclusions: Higher baseline vitamin K intake was associated with decreased knee symptoms over 24 months in patients with knee OA. These suggest that vitamin K intake may be beneficial for knee OA.

Disclosure of Interest: None declared

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FRI0526

THE IMPACT OF DISEASE CHARACTERISTICS IN KNEE AND HIP OSTEOARTHRITIS ON RECOMMENDATIONS FOR JOINT REPLACEMENT

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Background: Joint replacement in osteoarthritis (OA) is a major reason for hospitalisation in Germany.¹

Objectives: Which factors are associated with recommendations for joint replacement in patients with symptomatic hip and/or knee OA?

Methods: A total of 9734 persons, insured in a large statutory health insurance in Germany (Barmer), who had a diagnosis of OA (ICD-10 codes M15 [polyarthrosis], M16 [coxarthrosis] or M17 [gonarthrosis]) in at least two quarters in 2014 were randomly selected, stratified by age, sex and diagnosis (M15/M16/M17). They were contacted by mail and asked to complete a questionnaire regarding sociodemographics, health behaviour, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC, 0: no impairment- 100: extreme pain/stiffness/difficulty) and whether they had ever discussed total joint replacement (TJR) surgery with a physician. Patient-reported outcomes of the responders ($n=3,564$) were linked to claims data on prescriptions of pain medication and physical therapy. Persons with a diagnosis of M15 ($n=1,212$) were excluded from the present analysis. Patients who reported pain in the corresponding joints were analysed in three groups: OA of the knee, of the hip or of both. Logistic regression models