Sensitivity and specificity of US were calculated using microscopic findings as the gold standard.

Results: 101 patients have been enrolled in the study. 33 patients have been excluded due to loss of anatomical pieces at surgery. The mean age of the remaining 68 pts was 71yo (±8), 44 women, 34 were affected by CPPD according to microscopy. Overall and per site diagnostic US accuracy results are presented in table 1

	Diagnostic accuracy	Sensitivity	Specificity	Positive Predictive value	Negative Predictive value
Global	0.75	0.91	0.59	0.69	0.87
Medial meniscus	0.82	0.87	0.77	0.77	0.87
Lateral meniscus	0.75	0.83	0.68	0.68	0.83
Medial cartilage	0.86	0.79	0.92	0.88	0.85
Lateral cartilage	0.82	0.71	0.88	0.77	0.84
Medial side (combined cartilage and meniscus)	0.82	0.88	0.76	0.79	0.87
Lateral side (combined cartilage and meniscus)	0.78	0.88	0.69	0.73	0.86

Conclusion: Our results demonstrate that US is an accurate exam for identification of CPPD. The best combination of sensitivity and specificity is achieved by examining the medial aspect of the knee.

References:

[1] Filippou G, Scirè CA, Adinolfi A, *et al.* Identification of calcium pyrophosphate deposition disease (CPPD) by ultrasound: reliability of the OMERACT definitions in an extended set of joints—an international multiobserver study by the OMERACT Calcium Pyrophosphate Deposition Disease Ultrasound Subtask Force. *Ann Rheum Dis* 2018;:annrheumdis-2017-212542. doi:10.1136/annrheumdis-2017-212542

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OP0318 THE ROLE OF DUAL ENERGY COMPUTED TOMOGRAPHY (DECT) IN THE DIFFERENTIATION OF GOUT AND CALCIUM PYROPHOSPHATE DEPOSITION DISEASE

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Background: Differentiation of gout and calcium pyrophosphate deposition disease (CPPD) is sometimes difficult as patients often present with a similar clinical picture. Arthrocentesis and subsequent polarization microscopy (PM) remains the gold standard but novel diagnostic approaches such as non-invasive dual energy computed tomography (DECT) have recently been validated for gout. Currently, limited data is available on DECT in patients with CPPD.

Objectives: To analyse the diagnostic impact of DECT in gout and CPPD when compared to the gold standard of PM. We further compared the results of PM to ultrasound (US), conventional radiographs (CR), and suspected clinical diagnosis (SCD). Additionally, 15 laboratory parameters were analysed.

Methods: Twenty-six patients diagnosed with gout (n = 18) or CPPD (n = 8) who received a DECT and underwent arthrocentesis were included. Two independent readers assessed colour coded, as well as 80 and 120 kV DECT images for signs of monosodium urate (MSU) crystals or CPP deposition. US and CR from the patient's initial visit along with the SCD were also compared to PM. US examinations were performed by certified musculoskeletal ultrasound specialists. The association of up to 15 laboratory parameters such as uric acid, thyroid stimulating hormone, and C-reactive protein (CRP) with the PM results was analysed.

Results: Sensitivity of DECT for gout was 67% (95% CI 0.41-0.87) with a specificity of 88% (95% CI 0.47-1.0). Concerning CPPD, the sensitivity and specificity of DECT was 63% (95% CI 0.25-0.91) and 83% (95% CI 0.59-0.96) respectively. US had the highest sensitivity of 89% (95% CI 0.65-0.99) with a specificity of 75% (95% CI 0.35-0.97) for gout, while the sensitivity and specificity for CPPD were 88% (95% CI 0.47-1.0) and 89% (95% CI 0.65-0.99) respectively. The SCD had the second highest sensitivity for gout at 78% (95% CI 0.52-0.94) with a comparable sensitivity of 63% (95% CI 0.25-0.92) for CPPD. Uric acid levels were elevated in 33% of gout patients and 25% of CPPD patients. While elevated CRP levels were observed in 59% of gout patients and in 88% of CPPD patients, none of the 15 analysed laboratory parameters were found to be significantly linked.

Conclusion: DECT provides a non-invasive diagnostic tool for gout but might have a lower sensitivity than suggested by previous studies (67% vs 90%[1]). DECT sensitivity for CPPD was 63% (95% CI 0.25-0.91) in a sample group of eight patients. Both US and the SCD had higher sensitivities than DECT for gout and CPPD. Further studies with larger patient cohorts are needed in order to determine the diagnostic utility of DECT in CPPD.

References:

[1] Bongartz, Tim; Glazebrook, Katrina N.; Kavros, Steven J.; Murthy, Naveen S.; Merry, Stephen P.; Franz, Walter B. et al. (2015): Dual-energy CT for the diagnosis of gout: an accuracy and diagnostic yield study. In *Annals of the rheumatic diseases* 74 (6), pp. 1072–1077. DOI: 10.1136/annrheumdis-2013-205095.

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OP0319-PARE SEE ME HEAR ME: AN ANCA-ASSOCIATED VASCULITIS PATIENT CO-CREATION INITIATIVE

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Background: ANCA-associated Vasculitis (AAV) is a rare, severe small vessel vasculitis that affects multiple organs with a high acute mortality risk. As every patient presents differently, diagnosis is often delayed. Although treatments exist, responses vary, and remission is often not achieved or sustained. From the time of initial diagnosis onwards, patients suffer from an impaired quality of life. Coping with pain, fatigue, ongoing symptoms and combating challenges becomes a complex task and patients may be challenged in how best to communicate these emotions with health care professionals. We aimed to develop an initiative with Art and Voice, that would seek to empower people living with AAV and their carers in feeling understood, seen and heard in a meaningful way. This would invite a collective understanding of 'how people make sense of key life experiences and what it means to them' by creating a common language to address poorly addressed issues.

Objectives: This project aims to provide a voice to patients to express personal experiences and complexity of everyday living and empower people to feel in control of their own health through an online platform. It should also allow practitioners to gain new awareness about issues faced by their patients, to better understand the relationships between caring and curing, hearing and listening.

Methods: We collaborated with 10 patient association groups representatives, 17 AAV patients and 9 of their carers across 7 European countries. A series of workshops were set up to discuss issues faced and aid the subsequent production of a range of materials designed to provide clear, comprehensive content that would help individuals cope with the physical and emotional impact of AAV from diagnosis to living with it. This work was supported by a digital artist who is a rheumatologist living with vasculitis.

Results: The co-creation of patient information materials featuring real life patients was successful and led to the development of a creative initiative called SEE ME.HEAR ME with an online platform www.myancavasculitis.com. This includes: (1) an awareness programme featuring artwork created by the digital artist and advised by the patients which captures the essence of AAV from the patients view (see Figure). (2) a series of first-hand patient and carer stories capturing their authentic voice on 'what it is like to live with the disease'. (3) extensive