

Supplemental Table 5: Overview of the core features for multi-class and binary predictions

This table ranks and describes the five “core” features for multi-class and binary predictions, identified by *post-hoc* interpretability analysis, that were used to create our streamlined models AP5_top5_mu and AP5_top5_bi.

Multi-class predictions		
Rank	Feature	Description
1	MMXMA	MOAKS: medial meniscal extrusion - anteriorly
2	WOMKP	WOMAC pain score
3	EMTPD	% area of subchondral bone denuded of cartilage - medial tibia (external) [%]
4	WOMADL	WOMAC disability score
5	EBMFPD	% area of subchondral bone denuded of cartilage - central medial femur (external) [%]

Binary predictions		
Rank	Feature	Description
1	EBMFPD	% area of subchondral bone denuded of cartilage - central medial femur (external) [%]
2	WOMADL	WOMAC disability score
3	EMTPD	% area of subchondral bone denuded of cartilage - medial tibia (external) [%]
4	MMXMA	MOAKS: medial meniscal extrusion - anteriorly
5	MOSFMAⁱ	MOAKS: osteophyte size - femur medial anterior (trochlear)

ⁱ MOSFMA was utilised as a core feature in our streamlined model AP5_top5_bi in place of Urine_alpha_NUM (urine CTX-1a), as the latter was not available in the external dataset.