Multiple Myeloma is a disorder characterised by malignant proliferation of plasma cells within the marrow spaces of the axial and appendicular skeleton. Such proliferation leads to replacement of normal marrow components, triggers upregulated osteoclast activity and bone osteolysis through plasma secreted osteoclast stimulating proteins (RANK LIGAND), and leads to renal impairment through overexcretion of immunoglobulin components (light and heavy chains) produced by neoplastic plasma cells.

Traditional imaging with skeletal survey focused on the late development of bone destruction. Whole body CT improved detection of bone destruction. More recently both PET CT and Whole Body MRI have been championed as optimum methods for myeloma evaluation and detection. PET CT requires hypermetabolic disease and is therefore not valuable on all cases. Whole body MRI, in contrast, directly visualises marrow disease and is therefore valuable in all cases.

This talk reviews methods of imaging in myeloma, specifically reviewing the role of whole body MRI, emphasising its ability to subclassify the diseases and therefore predict both treatment response and ultimate outcome.