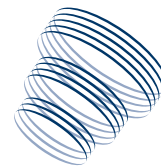
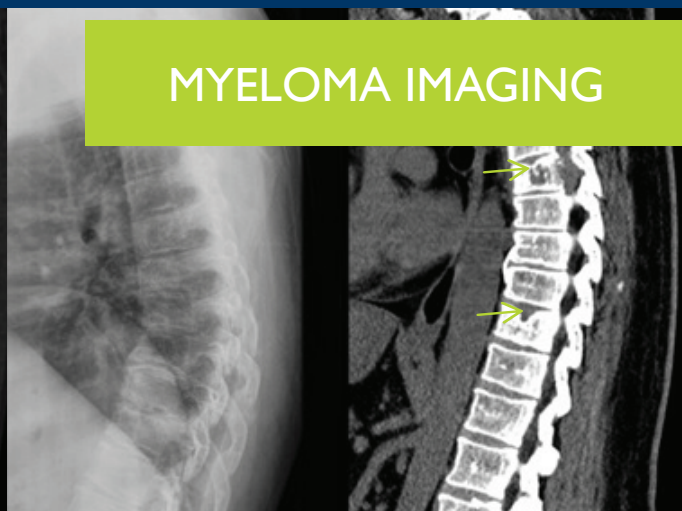


CHALLENGING CLINICAL CONSIDERATIONS

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MYELOMA IMAGING

Myeloma Imaging Investigation Revised best-practice imaging has changed, from an X-ray Skeletal Survey, to a CT Skeletal Survey.

Radiology in Australia is constantly evolving to keep up with patient expectations, technology and Medicare indications. Our aim is to stay up to date, and provide the most effective and efficient imaging solution to help manage patients in our local community.

In this article we consider the utility of whole body low dose CT (WBLDCT) skeletal survey in patients with, or suspected of having, myeloma.

Of the approximately 1,800 Australians who are diagnosed with myeloma each year, almost all are older than 40 years. Myeloma is most common in people aged 60 years and older, and men are affected more often than women.

Imaging for the detection of MM has evolved to enable detection of disease prior to overt bone destruction, and to include focal bone lesions (>5mm) which usually precede the development of lytic lesions by 18-24 months.

Plain xray skeletal survey is not able to identify focal bone lesions prior to overt destruction and therefore has become obsolete.

CT image of the femurs demonstrate focal bone lesions as indicated by the arrows, and CT of the spine demonstrates thoracic vertebral body lesions which are occult on xray.

In 2021, a clinical practice statement was compiled by the Medical Scientific Advisory Group (MSAG) which is a sub-committee of Myeloma Australia, which mandates that WBLDCT is “first-line imaging modality in suspected multiple myeloma (Level I, Grade A)”

Cross-sectional (CT) imaging should be offered to all patients with suspected multiple myeloma, non-secretory myeloma or intermediate-high risk asymptomatic disease

Smouldering multiple myeloma is an earlier stage asymptomatic clonal plasma cell disorder defined by the IMWG as presence of a serum monoclonal protein of $\geq 30\text{g/L}$ or urinary monoclonal protein $\geq 500\text{mg}$ per 24 hours and/or clonal bone marrow plasma cells 10-60% in the absence of myeloma defining events or amyloidosis. These patients account for 10-15% of those with plasma cell dyscrasias. The progression rate to symptomatic multiple myeloma is 10% per year for the first five years.

To refer, request a ‘CT Skeletal Survey’. This is a Medicare rebated scan, subject to the current RSA fee guide.

Radiology SA low-dose CT Skeletal Survey service is available at our clinics conveniently located at Flinders Private Hospital, Marion, Calvary Central Districts, Woodville, Port Adelaide, Dulwich, and Campbelltown.

References

- <https://myeloma.org.au/what-is-myeloma/>
- https://myeloma.org.au/wp-content/uploads/2021/05/MSAG_Imaing-Guidelines_May-2021.pdf