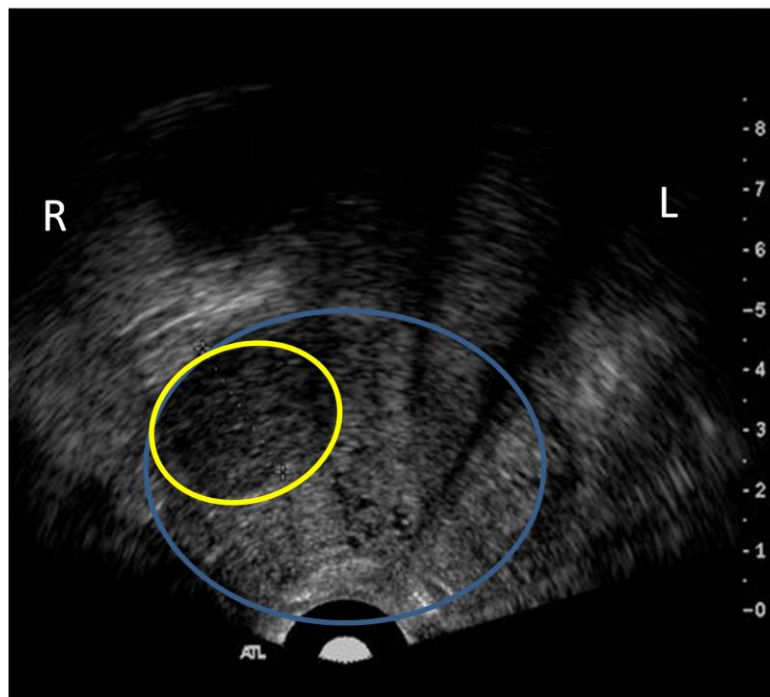
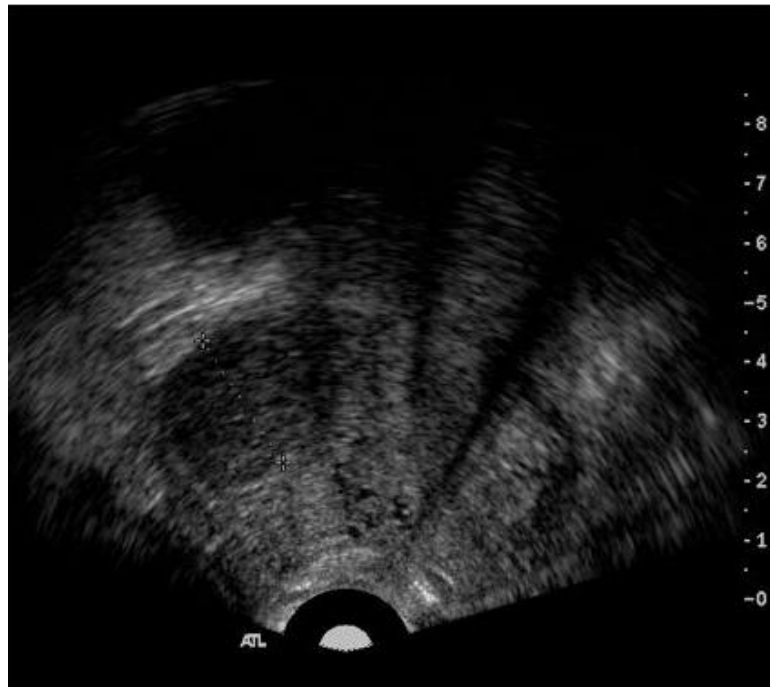


## Prostate cancer.

Transrectal ultra sound is used to image the prostate and guide the clinician to take biopsies of the peripheral zone. Prostate cancer can be seen as a hypo echoic area but often no abnormality is seen.



The prostate is circled in blue and the hypoechoic area, in yellow. Calcification and cysts can be seen as a normal finding in benign prostatic hyperplasia.

If prostate biopsies confirm cancer and the patient is a candidate for radical treatment, staging is required. An MRI scan helps identify the stage of the cancer and the possible presence of lymph node metastases.



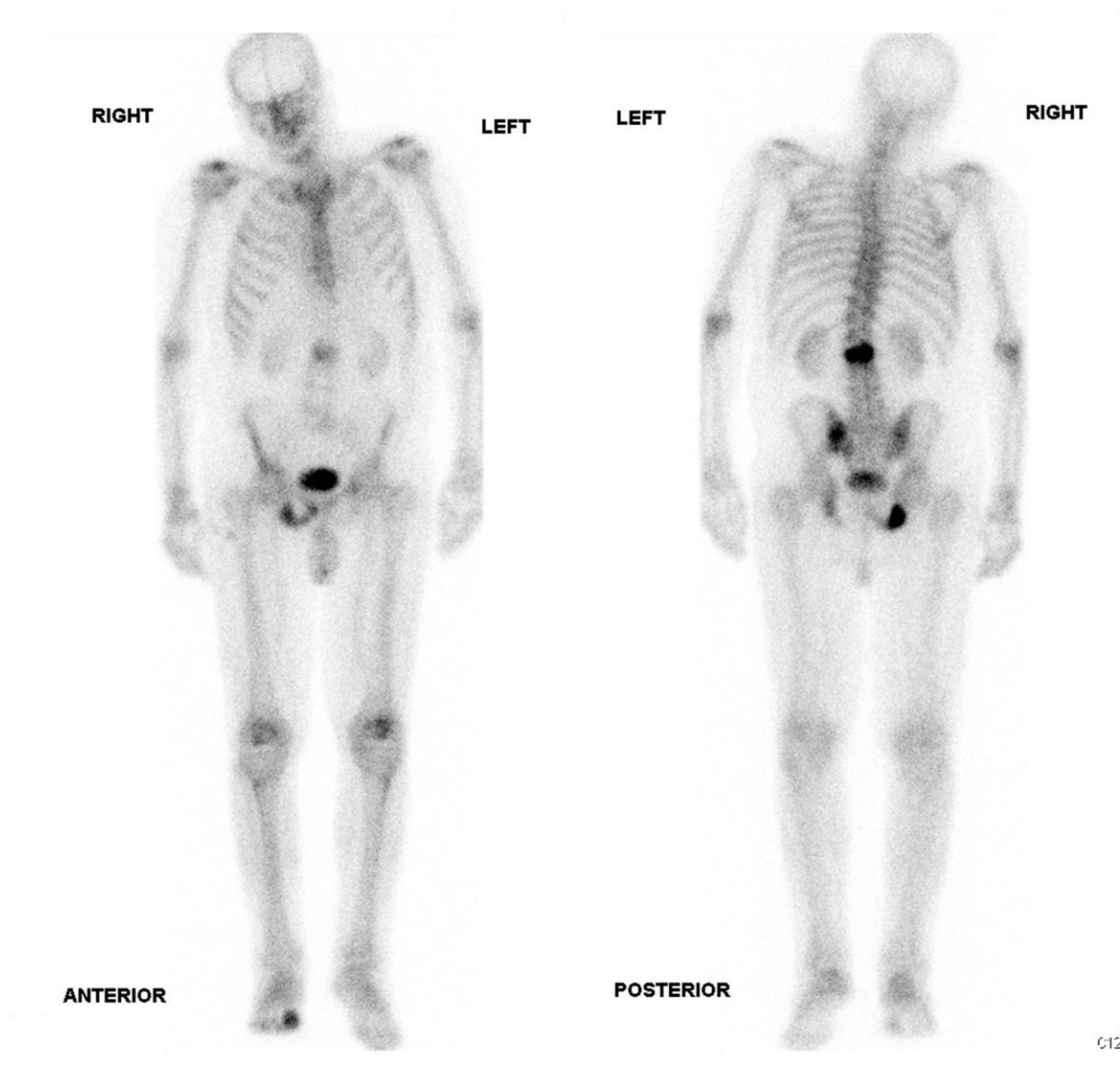
MRI scans of prostate cancer are difficult to interpret and as a student you would not be expected to. Just be aware that cancer shows as a low signal (darker area). In this example it is in the left side of the gland.

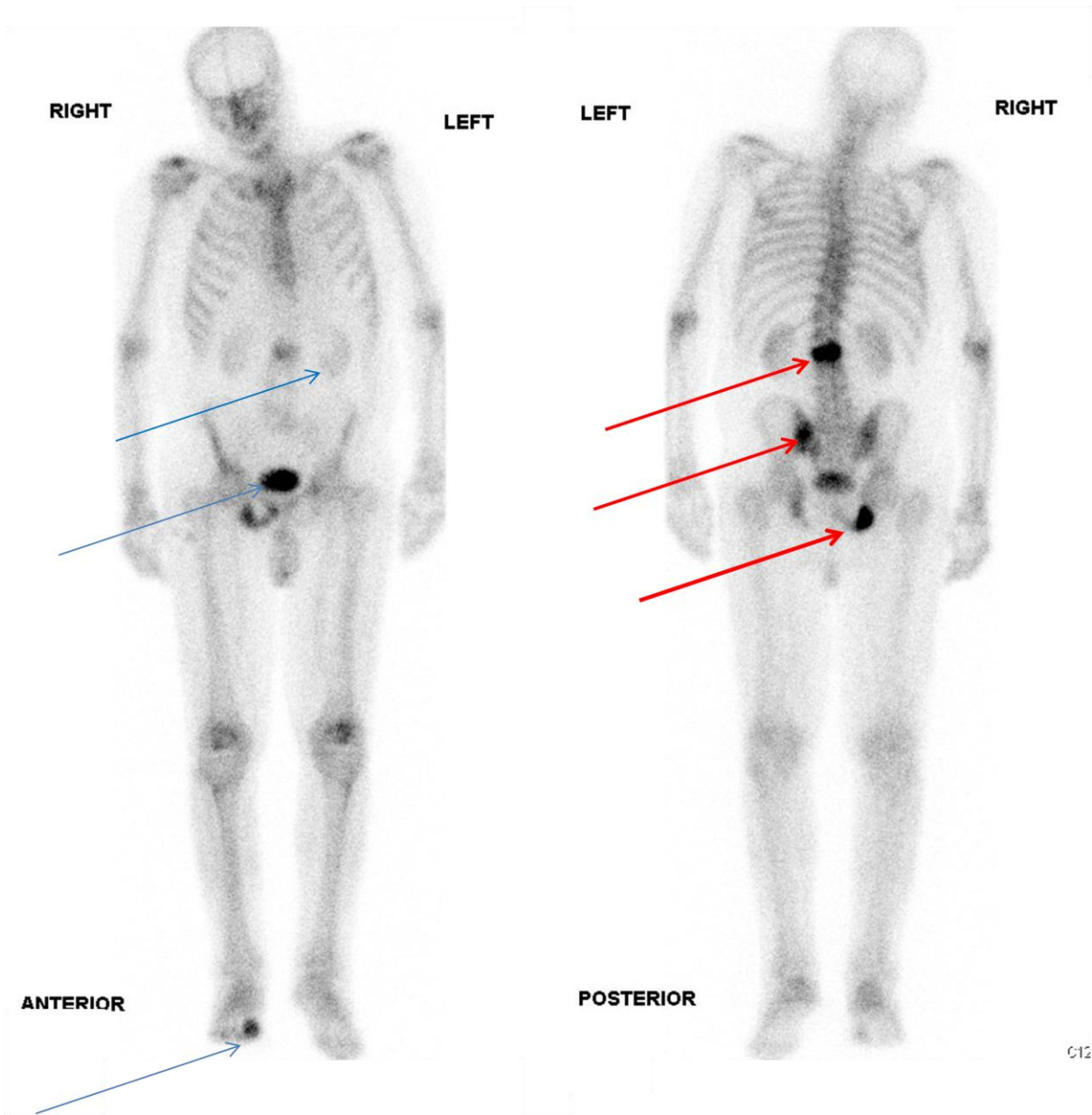
A bone scan is performed to look for evidence of bony metastases.

A tracer labelled with radioactive technetium-99 is taken up by physiologically active areas in bones. Accumulation of tracer in the kidneys and bladder is also seen as it is excreted.

Prostate cancer metastases show as dark 'hot spots'. The most commonly affected area is the axial skeleton, ribs and proximal long bones.

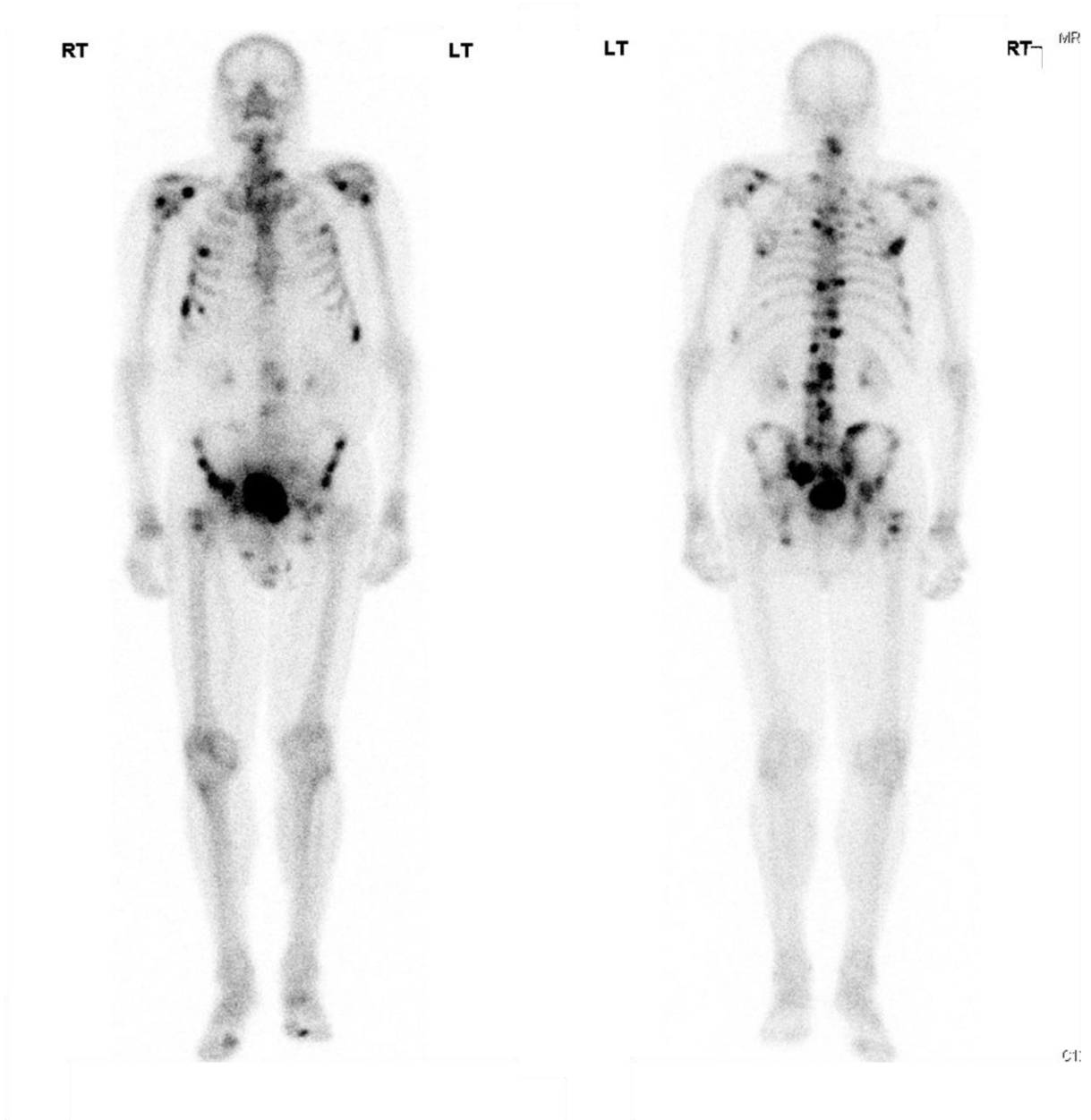
Fracture, infection, arthritis and certain bone diseases such as Paget's also show up and a plain film and detailed history may be necessary to differentiate between the different pathologies.





012

Blue arrows: kidneys, bladder and OA of the first metatarso-phalangeal joint can all be seen in addition to metastases in the L1 vertebra, ileum and right inferior pubic ramus (red arrows).



Multiple bony metastases in the vertebra, ribs, pelvis and proximal long bones.

Prostate metastases can be seen on plain film as sclerotic lesions (Circled –T10& 11 and L4 & 5).



This CT shows advanced prostate cancer. The prostate is very enlarged and there is spread to the inguinal lymph nodes which are seen surrounding the left femoral artery.





Blue arrow – catheter balloon displaced to the right by the huge prostate (in red). The prostate has a necrotic core (red arrow). The lymphadenopathy in the left groin (yellow circle) surrounds the femoral artery (yellow arrow).