



EVALUATION OF ^{99m}TECHNETIUM LABELLED ANTIBIOTIC SCINTIGRAPHY IN DIAGNOSIS AND MONITORING OF TUBERCULOSIS WITH BONE INVOLVEMENT



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Introduction:

- Skeletal TB makes up 10-15% of all cases with spinal TB accounting for 50% of skeletal TB cases.
- To assess the uptake of radiolabelled Ethambutol in patients with radiological evidence or high clinical probability of skeletal TB.

Study Design:

A cohort of **16 patients** diagnosed as skeletal TB was scanned at the Dept. of Nuclear Medicine of our institution. Consenting patients above 18 years of age fulfilling the following criteria:

- 1) Diagnosed to have bone tuberculosis (clinico-radiological, histopathological and/or Microbiological)
- 2) Treatment naïve or within 14 days of treatment initiation

Tuberculosis as you have never seen it before.

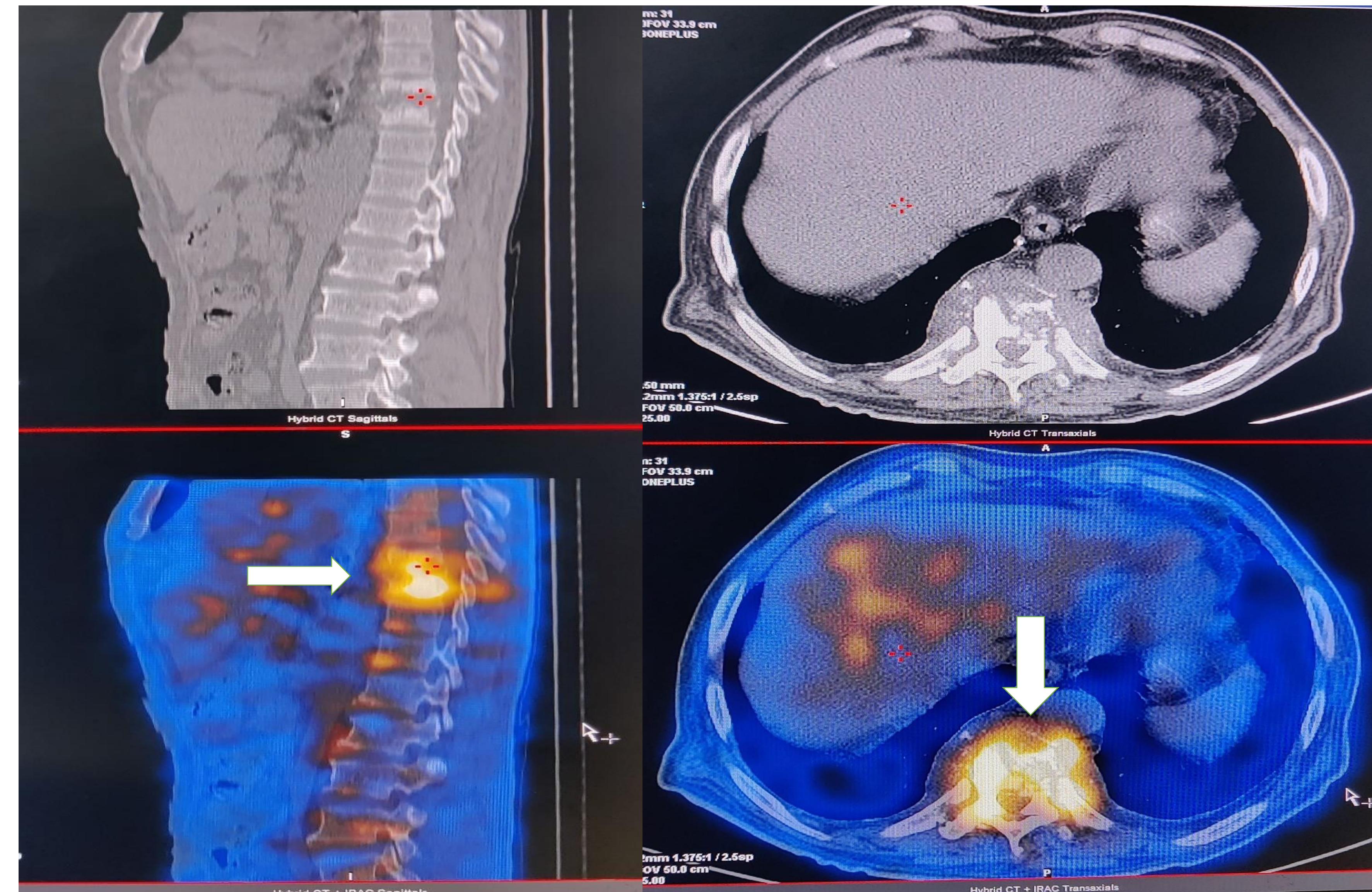
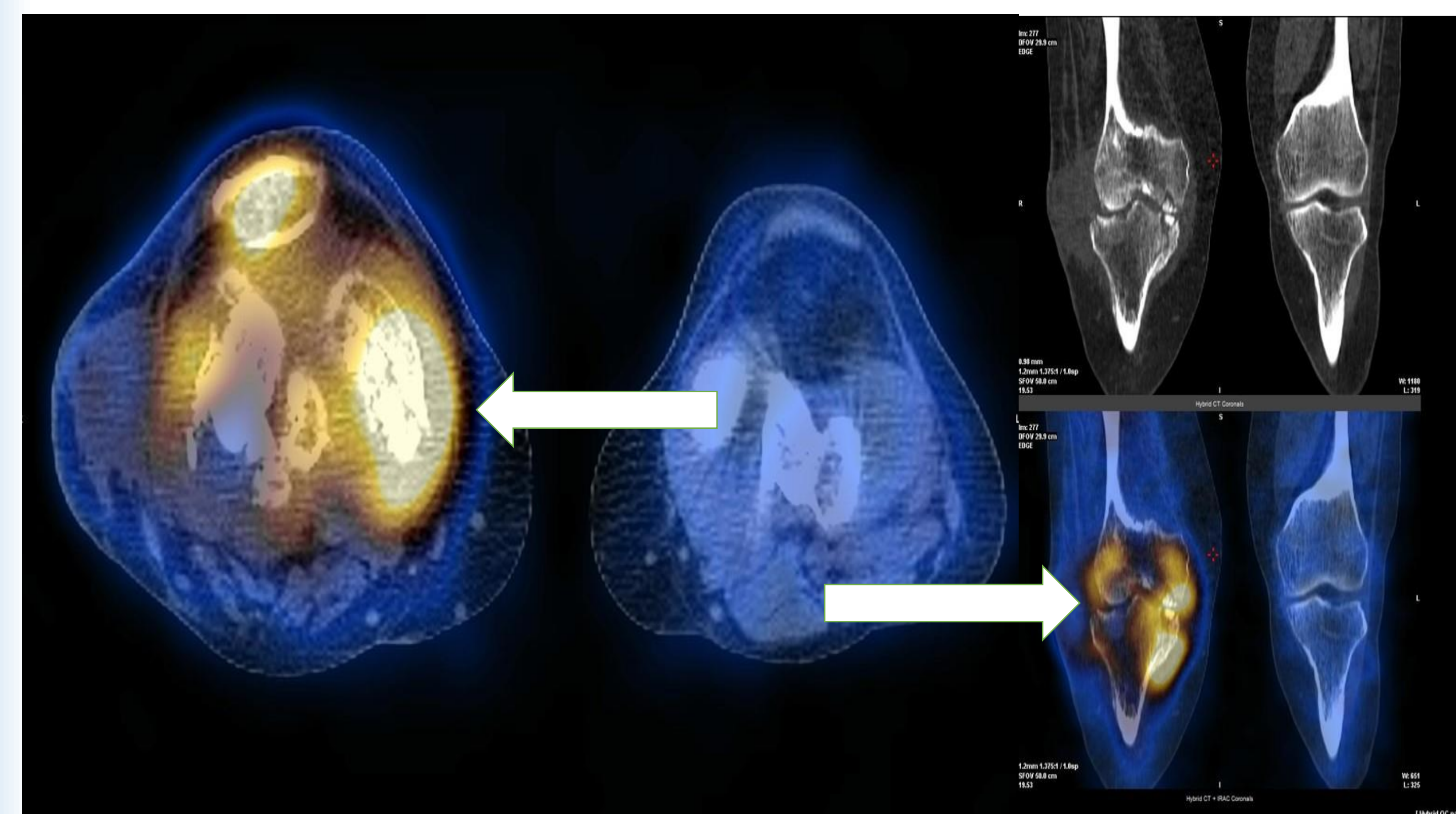


Fig 1: Sagittal and coronal images of CT and SPECT/CT show avid uptake in D9-D10 vertebrae with bony destruction

First prospective study in Indian patients with skeletal TB using ^{99m}Tc-labelled antibiotic scintigraphy and SPECT-CT with Ethambutol.

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	Positive scan pt.	Negative Scan pt.
No. of patients	12 (75%)	4 (25%)
Males	5/12 (41.66%)	0
Radiologically Confirmed Cases	11 (91.66%)	3 (75%)
No. of patients with isolated Skeletal tuberculosis	8/12 (66.66%)	2/4 (50%)
No. of patients with tubercular involvement other than Skeletal sites	4/12 (33.33)	2/4 (50%)
Patients expired	0	1



Images 2A & 2B: Irregular intense tracer uptake with lytic sclerotic changes in lower end of right femur, upper end of right tibia with adjacent soft tissue component and tracer avid fluid collection in the right suprapatellar region.

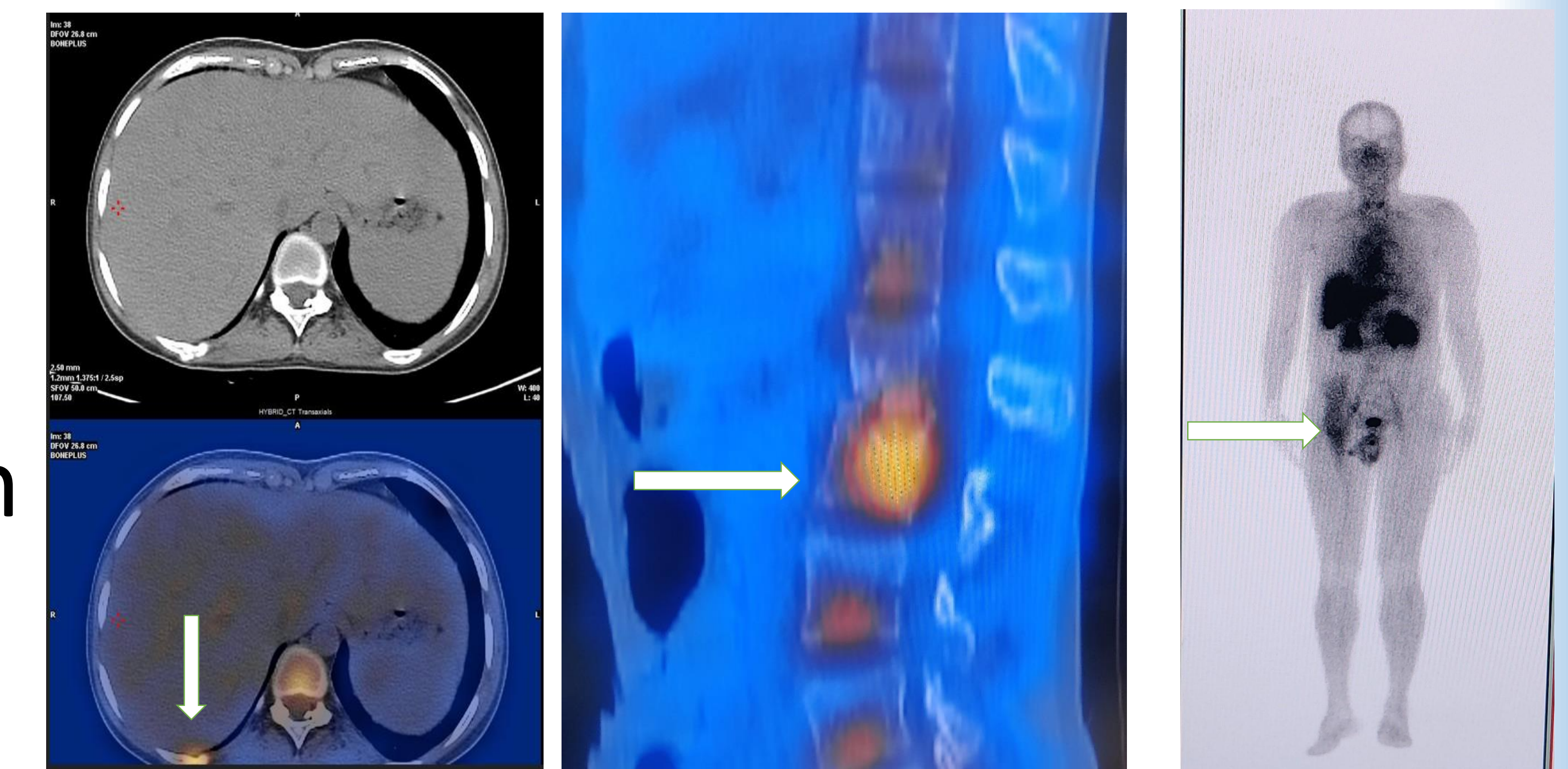


Image 3: Trans axial SPECT/CT of the same patient showing lysis and uptake in right 9th rib. Lytic lesion in body of D12 with increased tracer uptake

Image 4: Planar image shows uptake along the right Psoas Major muscle abscess

