

## Sub-super bone scan caused by bone marrow involvement of prostate cancer

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A 67-year-old man presented with malaise and marked anemia. A diagnostic workup revealed severe pancytopenia on a complete blood count and diffuse sclerotic change in the axial skeleton on a plain abdominal radiograph. Bone metastases being suspected from these findings, bone scintigraphy was performed. The bone scan demonstrated uniformly increased skeletal activity with faint soft-tissue activity. The findings of the bone scan, however, appeared atypical of the super scan caused by diffuse bone metastases, without any decrease in radioactivities of the appendicular skeleton and kidneys. Bone marrow scintigraphy with In-111 chloride demonstrated central marrow failure and peripheral expansion, which indicated the possibility of myelophthisis. The patient underwent bone marrow biopsy, which revealed replacement of the bone marrow by metastatic adenocarcinoma. Further examinations detected the primary lesion in the prostate. In this case, the findings of the bone scan were insufficient for the super scan, and might be categorized as a sub-super scan. It would be important to recognize this incomplete form of super scan as a rare scintigraphic pattern of diffuse bone marrow metastases.

**Key words:** sub-super scan, super scan, bone marrow metastases