

Y2BM

Y3BM

CT

SPECT

SPECT/CT

XR

123
YANG-3

123
YANG-3

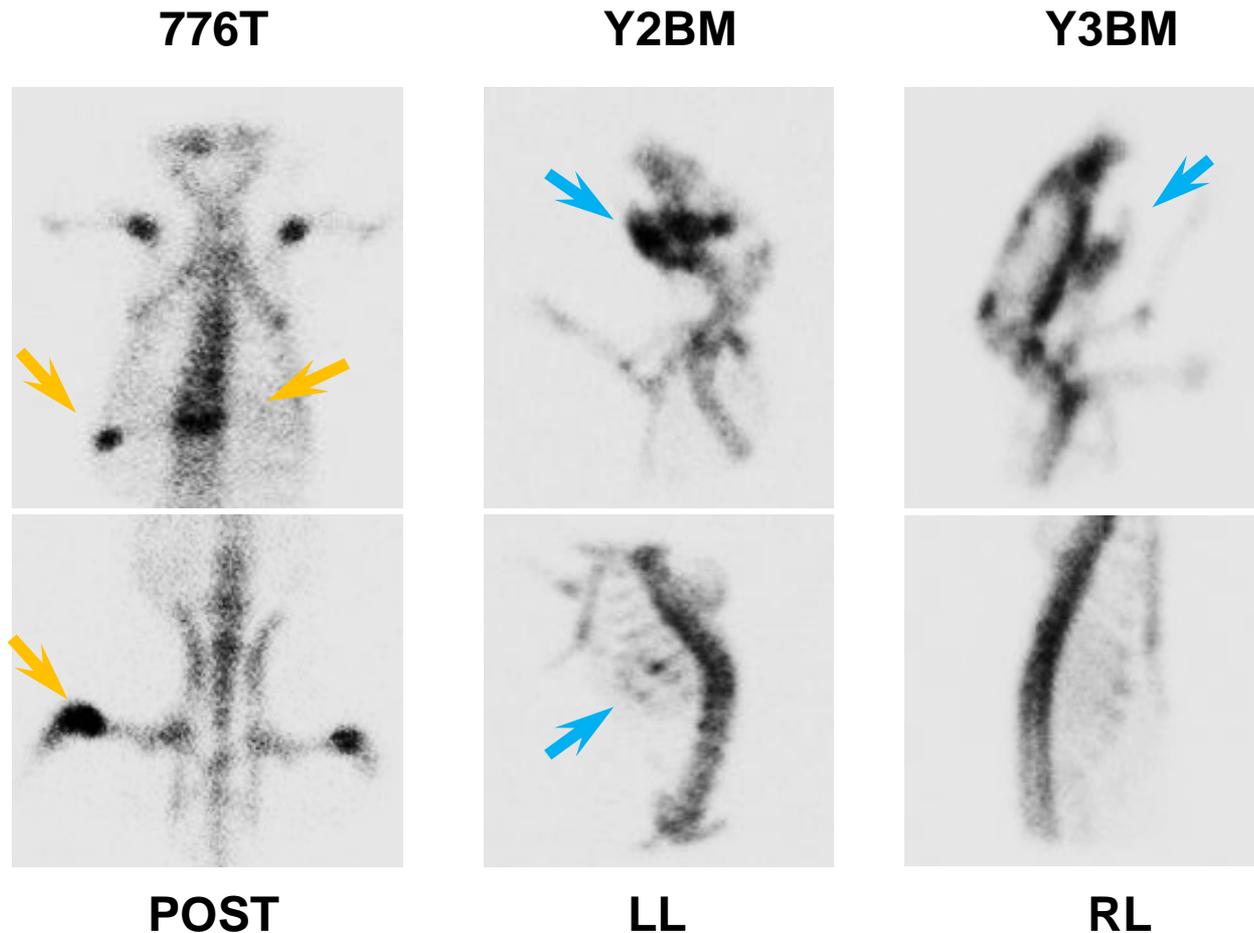
123
YANG-3

R

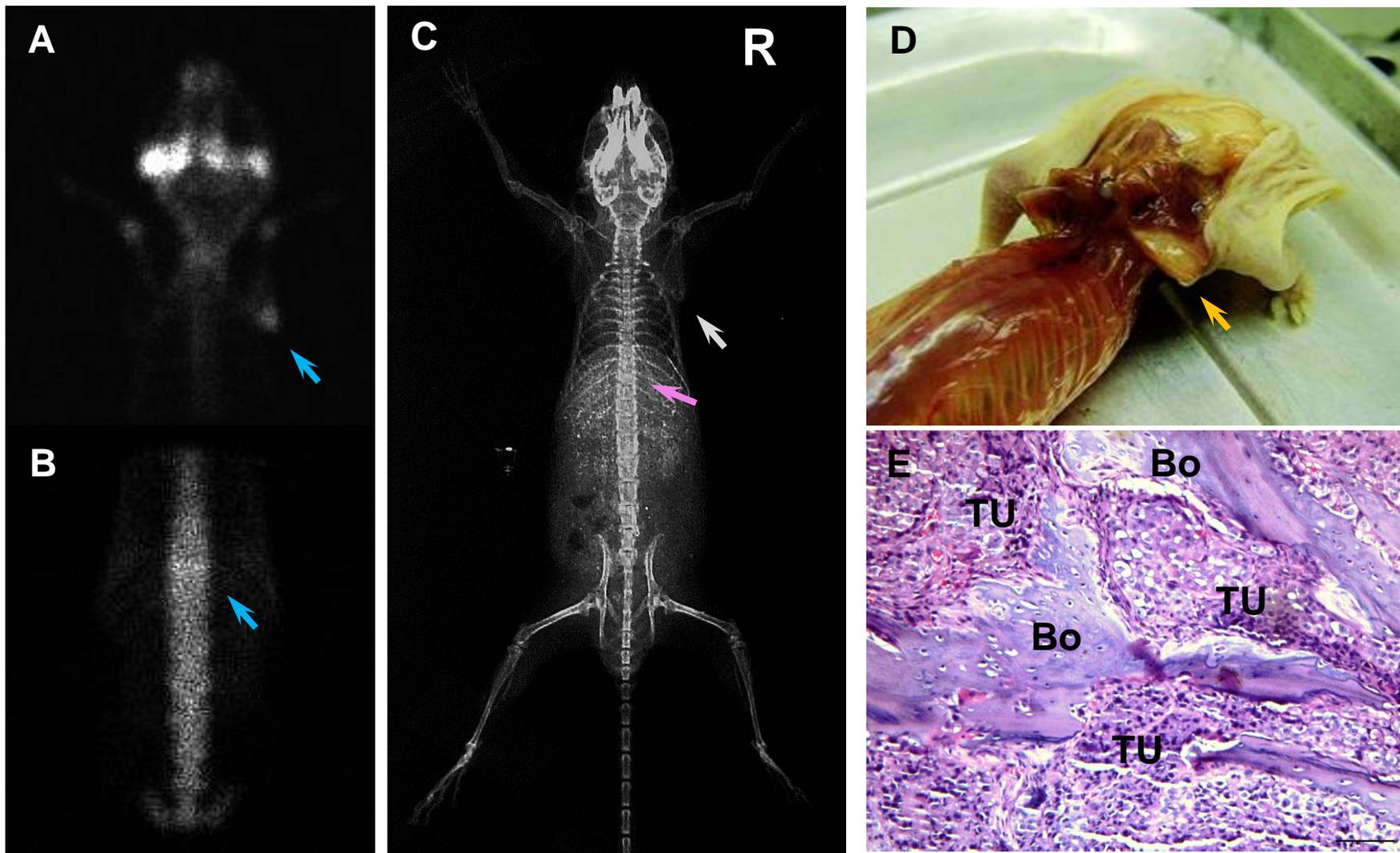
Supplementary Figure 3.

Supplementary Figure 3. Y2BM mouse with the osteoblastic metastases after intracardiac inoculation for **22** day, micro CT showed a right fourth rib root with sclerotic, micro SPECT and fused SPECT/CT not only captured the lesion but also detected the metastases in mandible, right scapula and right seventh rib. But, XR showed negative. **Y3BM** mouse with same metastatic subtype. Micro CT showed bilateral scapulae osteoblastic lesions, micro SPECT, and SPECT/CT showed same metastases in mandible, right cervical vertebra, both scapula and right eighth rib after intracardiac inoculation for **23** day. But XR showed negative. CT, Computer Tomography; SPECT, Single-photon Emission Computed Tomography.

Note: osteoblastic metastasis-light blue. Color of arrow at the lesion location in fused SPECT/CT: mandible-ochre, scapula-yellow, thoracic and lumbar vertebra-gray, rib-red, cervical vertebra-light green.

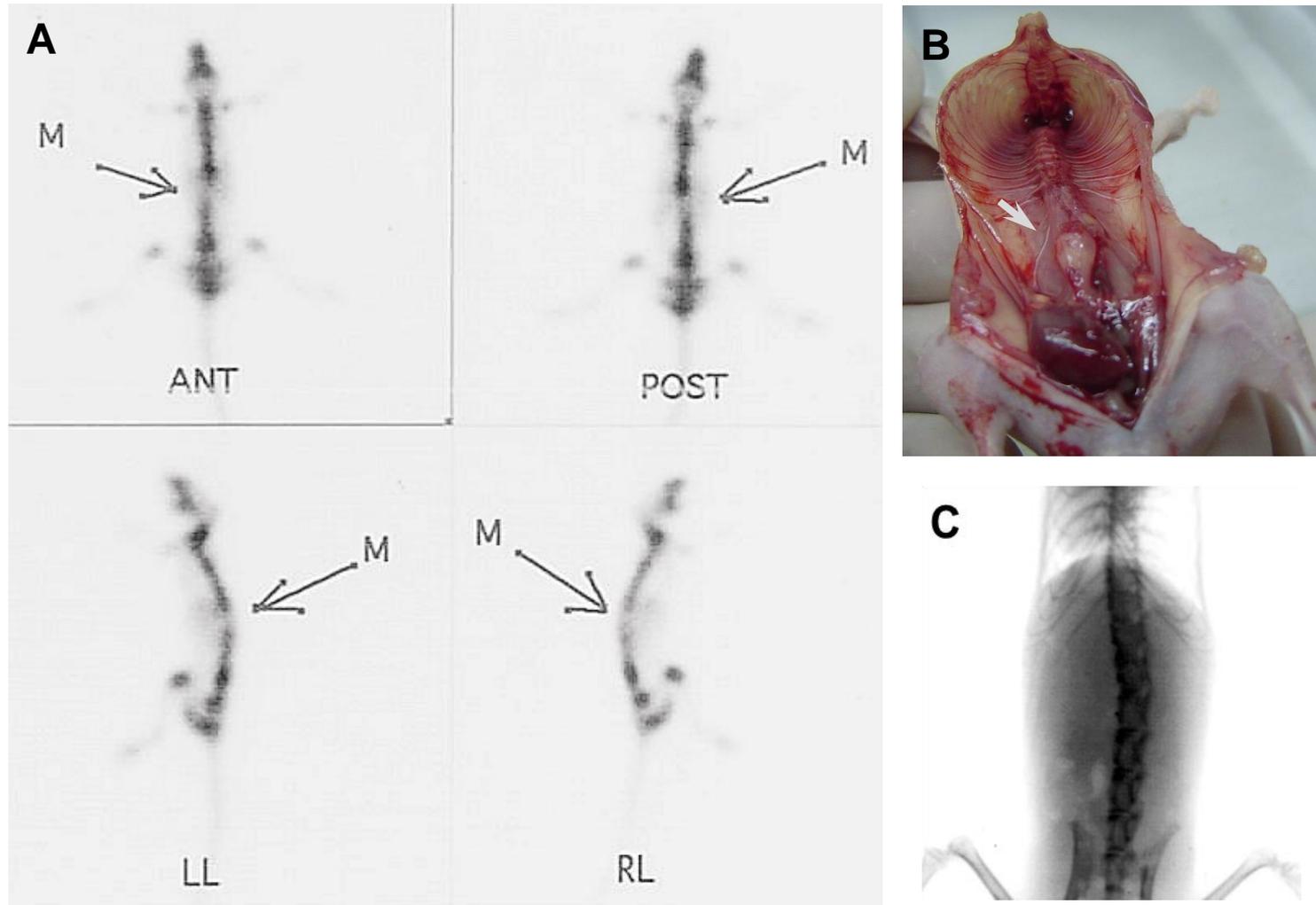


Supplementary Figure 4A. Representative images of tumor-bearing mice by micro pinhole bone scintigraphy (BS) are shown, respectively. The mouse of 776T with BM was detected in thoracic vertebra and the corresponding left rib, and left knee joint (orange arrows). The mouse of Y2BM mouse with BM was detected in mandible, and rib (light blue arrows). The mouse of Y3BM was detected in mandible. Osteoblastic metastasis-light blue, mixed BM-orange arrows. POST, Posterior; LL, Left lateral; RL, Right lateral.



Supplementary Figure 4B. Representative micro pinhole BS(A, B), XR(C), digital camera photo(D) and histological feature(E) of a Y3 tumor-bearing mouse confirmed mixed bone metastasis in the right scapula after intracardiac injection for 25 days (the color of arrows: osteoblastic metastasis-light blue, osteolytic-light gray, mixture of two-orange and suspected lesion-pink). BS, bone scintigraphy; XR, skeletal radiography; Bo, bone; TU, tumor; Bar, 200um,

MDA-231T LV10(6) 20060518-703



Supplementary Figure 4C. Representative images of MDA-231 tumor-bearing mice by static planar bone scintigraphy (A), after dissection of the digital camera photo (B) and X-ray (C) are shown, respectively. The mouse with the osteolytic metastases after intracardiac inoculation for 45 days. Image A shows a lack of radioactive tracer in the lumbar vertebra; Image B shows an approximately half-centimeter tumor (light-gray arrow) and bone scintigraphy is completely consistent, but X-ray is negative. It suggested that the tumor was caused by metastatic cells flow from the bone marrow cavity.