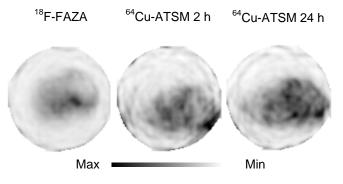
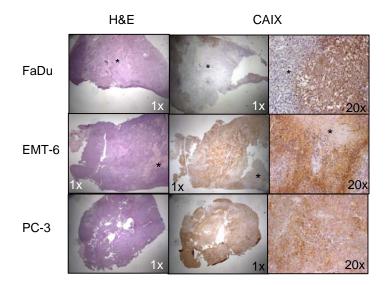


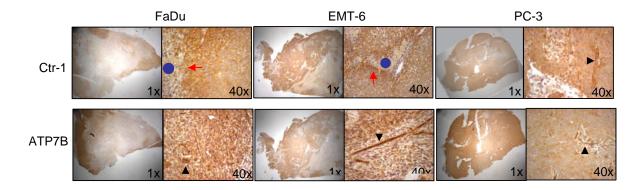
**SUPPLEMENTAL FIGURE 1.** Dual autoradiography studies. Representative images of dual autoradiography obtained after injection of [<sup>18</sup>F]FAZA and [<sup>64</sup>Cu]ATSM in the same mouse. In FaDu autoradiography images, it is possible to observe the same distribution.



**SUPPLEMENTAL FIGURE 2.** [<sup>18</sup>F]FAZA and [<sup>64</sup>Cu]ATSM comparison in FaDu model. Representative axial PET images from [<sup>18</sup>F]FAZA, [<sup>64</sup>Cu]ATSM at 2 and 24 h post injection in the same mouse.



**SUPPLEMENTAL FIGURE 3.** H&E staining at 1x magnification and CAIX immunostaining sections at 1x and 20x magnification. In FaDu and EMT-6 tumors, a wide necrotic area is shown (asterisks) and CAIX expression corresponds to [<sup>18</sup>F]FAZA distribution. In PC-3 lesion, multiple scattered necrotic and hypoxic foci are observed in the tumor mass in a geographic pattern (clear areas in H&E).



**SUPPLEMENTAL FIGURE 4.** Immunolocalization of copper pumps. Expression of Ctr-1 and ATP7B in FaDu, EMT-6 and PC-3 tumors of mice undergoing PET imaging. Blue dots indicate necrosis and red arrows indicate stronger immunostained peri-necrotic areas. In PC-3, copper pumps were homogenously distributed within all mass. Black arrows indicate the presence of ATP7B in neoplastic vessels.