This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Imaging			
Imaging breast cancer microcalcifications with Pam-Tc/Re-800	<p>Studies in rats suggest that a nuclear–near infrared dual modality contrast agent could potentially be used to detect breast cancer. Optical and nuclear imaging <i>in vitro</i> showed that the agent, Pam-Tc/Re-800, specifically bound hydroxyapatite, which is the major mineral component in breast cancer microcalcifications. The agent's specificity for hydroxyapatite was eightfold higher than it was for other calcium salts. In a rat model of breast cancer, the dual nuclear near-infrared agent was taken up by the skeleton and microcalcified tumors, whereas excess was excreted. The agent provided detection sensitivity comparable to the gold standard for nuclear imaging, ^{99m}Tc-methylene diphosphonate. Further studies could include optimizing the nuclear near-infrared imaging system and the near-infrared spectral properties of Pam-Tc/Re-800.</p> <p>SciBX 2(2); doi:10.1038/scibx.2009.77 Published online Jan. 15, 2009</p>	Patent and licensing status unavailable	<p>Bhushan, K. <i>et al. J. Am. Chem. Soc.</i>; published online Dec. 5, 2008; doi:10.1021/ja807099s</p> <p>Contact: John V. Frangioni, Harvard Medical School, Boston, Mass. e-mail: jfrangio@bidmc.harvard.edu</p>