Optical single-channel resolution imaging of the ryanodine receptor distribution in rat cardiac myocytes. Proc. Natl. Improved resolution in 'practical' light microscopy by means of a glass fibre 2π-tilting device, in: Optical and Imaging Techniques for Biomonitoring, edited by Hans-Jochen Foth, Renato Marchesini, Halina Podbielska, Michel Robert-Nicoud, Herbert Schneckenburger, Proc. SPIE 2628: 140-146. 39. Non-optical imaging includes a wide range of techniques based on different physical principles of signal detection, however, for Sc monitoring primarily magnetic resonance imaging and radionuclide techniques are employed. Non-optical imaging provides high spatial resolution at relatively large imaging depth, has significant sensitivity and provides information about structural (organ, tissue, cellular, molecular) and functional components. Gd3+ containing particles and macromolecules are used as a new generation of contrast agents [56, 57]. The main disadvantage of. In vivo Stem Cells Imaging Techniques J De Doe J 2015 â€“ vol. 7, No.4 177. REVIEWS. methods using paramagnetic agents is that they are not sensitive enough to visualize single cells [58].