

Molecular imaging

Functional molecular [imaging](#) such as [positron emission tomography](#) (PET) uses various [tracers](#) to visualize biological processes such as [cell proliferation](#), membrane biosynthesis, glucose consumption, and uptake of [aminoacid](#) analogs ¹⁾.

[Chemical Exchange Saturation Transfer](#) (CEST) has drawn considerable attention as a novel mechanism of [MRI](#) contrast. This method provides more detailed physiological and functional information than conventional MRI and has emerged in the field of [molecular imaging](#) ^{2) 3)}.

¹⁾

Ia Fougere C, Suchorska B, Bartenstein P et al. Molecular imaging of gliomas with PET: opportunities and limitations. Neuro Oncol. 2011;13 (8):806–819.

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van Zijl PC, Jones CK, Ren J, Malloy CR, Sherry AD. MRI detection of glycogen in vivo by using chemical exchange saturation transfer imaging (glycoCEST) Proc Natl Acad Sci USA. 2007;104(11):4359–4364.

³⁾

Mani T, et al. Modulation of water exchange in Eu(III) DOTA-tetraamide complexes: considerations for in vivo imaging of PARACEST agents. Contrast Media Mol Imaging. 2009;4(4):183–191.

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