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New imaging technique for removing tumors

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Compression optical coherence elastography (OCE) is a high-resolution optical imaging technique probing the mechanical properties of tissue.

Researchers at BRITElab at Harry Perkins Institute of Medical Research and the University of Western Australia have developed an imaging technique that assists surgeons to effectively remove all tumours during initial breast cancer surgery. The aim is to remove all malignant tissue surrounded by a ‘margin’ of healthy tissue avoiding secondary surgeries.

Compression optical coherence elastography (OCE) is a high-resolution optical imaging technique probing the mechanical properties of tissue, identifying malignant tumours and creating a 3D image of tissue elasticity.

A benchtop motorised lab-jack must apply bulk preload to tissue before elastography is performed. The Futek miniature s-beam load cell (on the lab-jack) measures force ensuring a suitable intra- and inter-specimen comparison of elasticity reading.