TCS/17/05 – Contrast enhanced breast tomosythesis in patients suspected of having breast cancer: a prospective comparsion with state of the art breast MRI

The most commonly used test to detect breast cancer is a mammogram, a low dose x-ray. This shows most breast cancers, especially in fatty breasts, but when breast tissues are dense (a common normal variation), they can be missed. This means that extra tests like magnetic resonance imaging (MRI) are needed to show if a cancer is present and how bit it is.

New forms of mammogram have been developed to tackle this problem. Digital breast tomosynthesis (DBT) 'unwraps' overlapping shadows and shows distortion caused by slower-growing cancers. Contrast enhanced spectral mammography (CESM) involves injection of a 'dye' that highlights the abnormal supply to cancerous tissues in the breast and tends to show faster-growing cancers. It has been shown to work nearly as well as magnetic resonance imaging (MRI), the 'gold standard' test for detecting breast cancer. In this study, we are combing DBT and CESM into one test (CE-DBT) and we aim to study how good it is at identifying all forms of breast cancer in women who are attending the outpatient breast clinic with suspicious lumps. If we show that the test works, we could greatly improve patient care by diagnosing breast cancer more quickly and accurately.