Developing blood tests to detect genetic alterations of upper stomach and lower food-pipe cancers

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What is the aim of this study?

• To detect the common gene alterations in tumour samples of patients with upper stomach and lower oesophageal (food pipe) cancers and identify markers of good response.
• To develop accurate blood tests that can detect the identified gene alterations in blood samples.

Why is this research important now?

• The occurrence of upper stomach and lower oesophageal cancers has increased significantly over the last 40 years.
• In the UK, around 15,000 people are diagnosed with stomach and oesophageal cancers each year.
• The treatment options are limited and the outcomes are poor particularly with advanced disease.
• Exploring the genetic alterations can help us choose the right treatment for each patient and develop new therapies.
• Recently, there has been a large development in the blood tests to detect genetic information in the blood.
• Blood tests are less invasive and more practical than tissue tests, and thus can create early diagnosis that leads to better outcomes.
• In addition, blood tests will allow us to monitor response closely in more patients and take action earlier for a better response.

How will this study be done?

42 patients have already donated cancer tissue and blood samples to the Leicester Cancer Research Biobank from September 2015 to September 2016.

Next, we will design blood tests that can detect the identified gene alterations in the blood samples.

Finally, we will correlate the data from tissue and blood samples with each other and with treatment response in patients. This will give us insight into markers of early detection and good response.

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Dr Ali Abdulnabi Mohamed is funded by a NIHR Academic Clinical Fellowship. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.