STRIDE-RCT: How the tests work

A national trial of new blood tests to help GPs find abdominal cancers earlier, and send fewer people for hospital tests they do not need.

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Inside the blood test

When cancer grows, it can leave small traces in the blood. These tests look for traces from several types of cancer at once, using one ordinary blood sample.

1. Circulating tumour DNA

Cancer cells shed fragments of their DNA into the blood, known as circulating tumour DNA (ctDNA). The test reads chemical marks on these fragments, called methylation, that are typical of cancer and can often suggest where in the body it started.

2. Proteins in the blood

Cancers, and the body's immune and inflammatory response to them, change the levels and structure of proteins in the blood. Proteomic tests measure many proteins at once and look for the pattern linked to cancer.

3. Artificial intelligence

A computer combines age and sex with routine blood results, such as blood count, liver and kidney tests, and tumour marker tests such as CA125 and CEA, to spot combinations linked to cancer.

From the GP to the result

1. GP appointment	2. Blood sample	3. Laboratory	4. Result
Symptoms such as bloating, pain or weight loss	Often alongside routine blood tests	Sample tested in a specialist laboratory	Back to the GP within days

What the result means

Cancer signal detected	Not a diagnosis. The GP arranges further tests, often guided by the part of the body the result points to.
No cancer signal	Reassuring, but it does not rule cancer out. Patients should go back to their GP if symptoms continue or get worse.

This document provides general information about a research study. It does not give medical advice.

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