

**BLOOD SCIENCES  
DEPARTMENT OF CLINICAL BIOCHEMISTRY**

Title of Document: CA153 Summary of Assay Change  
Q Pulse Reference N<sup>o</sup>: BS/CB/DCB/EXDOC/7  
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Version N<sup>o</sup>: 1.0

### Assay change for CA153

From 14/11/2022 at NBT, 10/01/2023 at RUH and later in 2023 at UHBW, the Clinical Biochemistry departments at each Trust will be moving to a new suite of analytical equipment, produced by Beckman Coulter UK (BCUK). For most assays there will be either no, or only very small, differences in results.

In the case of CA153 there are some expected method related differences that will affect result interpretation, particularly in patients with known elevated CA153 levels. These are summarised below:

#### Acceptable sample type

- Serum (yellow topped SST tubes) and Lithium Heparin (green topped tubes) will continue to be acceptable for CA153 analysis.

#### Interpretation of CA153 at normal levels

- There is an expected negative bias when samples are analysed on the new CA153 assay vs the current assay but minimal change in the reported upper limit of normal (ULN):

Current ULN manufacturer (Roche) derived	New ULN manufacturer (BCUK) derived
<25 kU/L	<24 kU/L

#### Interpretation of CA153 in patients with known elevated levels

- At high CA153 concentrations, there is an expected significant decrease in CA153 results on the new assay (mean -50%). However, there is variability around this bias in individual samples; therefore this figure should be treated with caution.

#### Recommendation for monitoring patients with known elevated CA153 due to cancer

- We recommend establishing the new trend in CA153 results by repeat analysis on the new assay over a period appropriate for individual patient cases rather than attempts to “convert” results on the new assay to what might have been expected on the old assay.