

SERUM CREATININE: REALIGNMENT OF RESULTS TO REFERENCE METHOD

FREQUENTLY ASKED QUESTIONS

Why do we need to realign our creatinine results?

There are several reasons:

- We use (as most other laboratories do) a Jaffe method which is non-specific and several serum constituents interfere with the method including protein, bilirubin and ketones. Different Jaffe methods give different results.
- When the UK decided to adopt the eGFR MDRD formula it was realised that laboratories would get different eGFR results depending on which Jaffe method we use.
- Therefore the UK decided to modify the MDRD formula by using method specific 'slope adjusters' so that eGFR results would be comparable across the UK and to a reference method for creatinine results (IDMS).
- As a result of these eGFR adjusters, every laboratory produces the same eGFR values irrespective of their creatinine method.

So... why do we need to realign our creatinine results?

The problem with the above approach is that although we all produce comparable eGFR results, our creatinine results are different. In 2007 the NKDEP/IFCC/EC4 bodies (international renal and clinical chemistry organisations) recommended that every creatinine method should be re-aligned to the IDMS reference method. When we introduced eGFR in June 2006, the Essex laboratories agreed that we would adopt the eGFR adjusters but not adjust our creatinine results so as not to cause confusion.

Why change now?

It has become apparent that since June 2006, several Essex laboratories (including Southend) have updated equipment and realigned their creatinine methods to IDMS. Therefore, our creatinine results are no longer comparable with other Essex (and London) laboratories.

What effect will it have on creatinine results?

The 'slope adjusters' used in the eGFR equation are (Basildon Creatinine - 16.14) / 0.955). A good approximation of this adjustment is to take 15 $\mu\text{mol/L}$ off our current creatinine results.

Will it effect eGFR results?

No. The slope adjusters will be removed from the eGFR calculation so that eGFR results will not be affected after we realign the creatinine method.

When are we changing?

1st June 2009.

How will we know if the creatinine result is with the old or newly aligned method?

For a period of at least 12 months, we will report the newly aligned creatinine result with a comment indicating this change. Reference ranges will also be updated to reflect the new values. Creatinine results before 1st June 2009 (on results reporting etc.) will still have the correct old reference ranges associated with them.