



## Change to Urine Processing Pathlab BOP & Waikato

**Please note the leucocyte threshold at which urine culture will be routinely performed will increase in females from 20 to 30 x10<sup>6</sup>/l. This change will take effect from 13<sup>th</sup> July 2016.**

Automated urine microscopy by the [IRIS platform](#) is now well established in the Waikato region, and more recently in the [Bay of Plenty](#).

At present urine culture is performed if the leucocyte count is 20 x10<sup>6</sup>/L or greater (or if certain clinical criteria are met, e.g. pregnancy, neonatal period, prior to urological surgery, significant immunocompromise).

Within the cohort of urines that are just on the current leucocyte culture threshold of 20 x10<sup>6</sup>/L, it has anecdotally been noticed that high numbers of the 'positive' culture results are light or mixed growths, or contain little clinical data to suggest a true urinary tract infection (UTI).

We therefore objectively analysed the microscopy, culture results and clinical details for this cohort of urines in more detail to ascertain whether culture is justified for this group.

The results of this study showed that it is likely that the majority of culture results in the cohort of female urines with a white cell count of 20 x10<sup>6</sup>/L do not represent actual urinary tract infection (UTI). We estimate that approximately 5% of urine cultures in this cohort represent a "probable UTI".

In addition, the routine reporting of culture and susceptibility results in urines with low leucocyte counts leads to the risk of inappropriate antibiotic therapy and selection pressure for antimicrobial resistance.

Therefore a decision has been made to increase the culture threshold for female urines to 30 x10<sup>6</sup>/l.

CLINICAL UPDATE

The culture threshold for male urines will remain at  $20 \times 10^6$ /l. The sample size for males in the analysis was too small to make any objective interpretation.

This change also brings our leucocyte thresholds for urine culture more into line with other laboratories in New Zealand.

Any urines which have not been cultured based on the IRIS microscopy results will have a comment added as follows: *“The urine microscopy results indicate that UTI is unlikely, therefore culture has not been performed. If there is significant clinical reason to justify culture, please contact the microbiology laboratory as soon as possible.”*

We would like to re-emphasize the importance of placing clinical details on the request form, even for routine urine samples. Knowledge of the clinical context in which the laboratory request has been made is of great importance in determining the clinical significance of any results generated and how they are reported back to the requestor.

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