

How to Interpret a Paediatric Blood Culture

O'Hagan S, Nelson P, Speirs L, Moriarty P, Mallett P. – ADC E&P 2021

Diagnostic Stewardship

Diagnostic stewardship means testing the right patients for the right reasons. If you don't suspect a Blood Stream Infection (BSI), don't send a BC.



Consider:

- Presentation and illness severity
- Probable source of infection
- Past medical history
- BSI risk factors

Pre-test Probability

Blood Culture Volume is Key



Suggested Minimum BC Volumes

<1 kg	~0.5ml
<5 kg	0.5 – 1ml
<1 year	1 ml
2 – 5 years	2 – 5 ml
5 – 16 years	5 – 15ml

Antibiotics

Consider stopping antibiotics at 24-36 hours if BC negative-to-date and low suspicion of BSI.

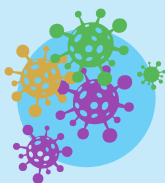
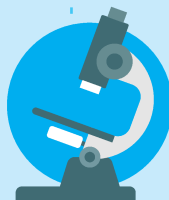


Negative Blood Culture

Negative BC doesn't always exclude BSI, especially if a small inoculum was obtained. In any child with high pre-test probability and negative BC to date, consider repeat BC and review antibiotic treatment.

Holistic Approach

Adopt a holistic approach when interpreting the significance of a positive culture - does this fit with the clinical picture; is this bug a common pathogen or possible contaminant? Liaise with Microbiology colleagues for advice.



Persistent Positivity

When the same bug is repeatedly isolated, thorough daily clinical re-evaluation & early liaison with Infectious Diseases is warranted.

There must be active attempts for source identification and concerted efforts to achieve source control.