



milenia biotec

We bring diagnostics closer to the patient

Sepsis Diagnosis

Which child needs therapy?



Foto: R. Hammer (www.fotolia.de)

***New:
Only 50 μ L whole
blood required!***

**Our simple point-of-care IL-6 test
will quickly help you decide**

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Autoimmun ▼ Hohe Straße 4-8 · 61231 Bad Nauheim

Immunologie ▼ Tel.: 0 6032/80 40-0 · Fax: 0 6032/80 40-80

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Background

Neonatal sepsis is one of the main reasons for morbidity and mortality in newborn infants. At an annual rate of approximately 770,000 deliveries in Germany around 1000 to 8,000 of these babies are at risk of dying. The uncharacteristic clinical signs of sepsis means that many children are often treated prophylactically with antibiotics before a confirmed diagnosis.

Objectives of Sepsis Diagnostics:

- Quick and safe early detection
- Selective therapy strategies

Decision Support

Due to the relatively slow rise of biological markers such as CRP, which can be in the normal range at the start of an infection, an early diagnosis of sepsis may not be easy to confirm. However, it is possible to detect a rapid rise in cytokine levels such as IL-6 or IL-8 (the clinical relevance of both is comparable) one to two days earlier than CRP; this clearly could improve the outcome for your patient.

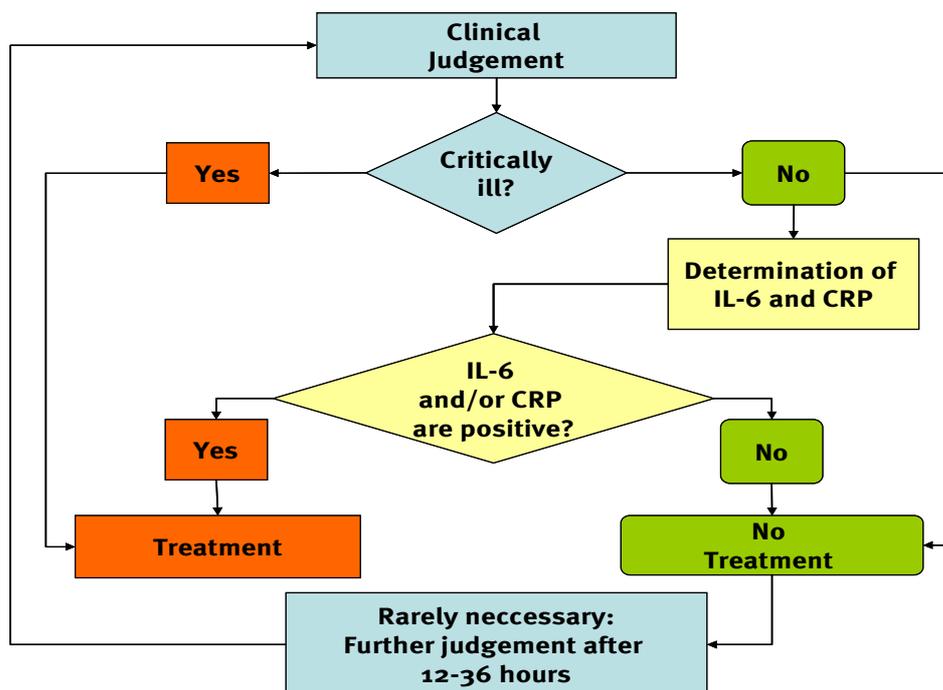
Even better, the use of IL-6 or IL-8 in combination with CRP allows you to exclude an infection with a very high probability. The savings of unnecessary prophylactic antibiotics in itself leading to a cost reduction for the care of the newborn baby (Ref 1).

The evaluation for laboratory determinations in the German Guidance Neonatology / Bacterial Infections in Newborns says (Ref 3):

“The highest sensitivity together with highest specificity during the complete time course of an infection is currently a combination of IL-6 or IL-8 together with CRP”.

Well Proven Strategy

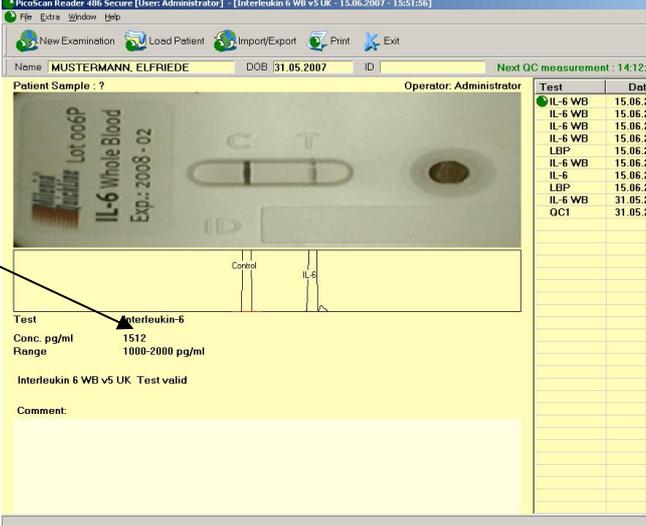
During the last few years, the usefulness of incorporating IL-6 measurements into the strategy for the diagnosis of sepsis has been proven in the day-to-day hospital life of neonatology departments:



Milenia® QuickLine IL-6 Whole Blood – Your Advantages

- Quick: real-time therapy decisions on the ward with rapid point-of-care diagnostics
- **New and unique: only a small 50 µL whole blood sample is required**
- Easy to use: no sample preparation
- Low staff requirements: hands on time is just a few minutes
- PicoScan: simple, maintenance-free, quantitative results (pg/mL); no additional reagent costs

So simple ...

<p>1 Add 50 µL whole blood (capillary or venous) to the test unit.</p> 	<p>2 Add one drop of buffer.</p> 																						
<p>3 Simply place the test unit into the PicoScan reader and run the IL-6 program.</p> 	<p>4 Return to the PicoScan reader after 25 minutes - your IL-6 results will have been automatically calculated for you.</p>  <p>The screenshot shows the PicoScan Reader software interface. At the top, it displays 'PicoScan Reader 406 Secure [User: Administrator] - [Interleukin 6 WB v5 UK - 15.06.2007 - 13:51:56]'. Below this, there are menu options: File, Extra, Window, Help. The main window shows patient information: Name MUSTERMANN, ELFRIEDE, DOB 31.05.2007, ID, and Operator Administrator. A 'Next QC measurement: 14.12' is also visible. The central part of the screen shows a scan of the test unit with 'Control' and 'IL-6' lanes. Below the scan, the results are displayed: Test Interleukin-6, Conc. pg/ml 1512, Range 1000-2000 pg/ml. The status is 'Interleukin 6 WB v5 UK. Test valid'. A table on the right side of the interface lists various test results with columns for 'Test' and 'Date'.</p> <table border="1"> <thead> <tr> <th>Test</th> <th>Date</th> </tr> </thead> <tbody> <tr><td>IL-6 WB</td><td>15.06.2</td></tr> <tr><td>IL-6 WB</td><td>15.06.2</td></tr> <tr><td>IL-6 WB</td><td>15.06.2</td></tr> <tr><td>IL-6 WB</td><td>15.06.2</td></tr> <tr><td>LBP</td><td>15.06.2</td></tr> <tr><td>IL-6 WB</td><td>15.06.2</td></tr> <tr><td>IL-6</td><td>15.06.2</td></tr> <tr><td>LBP</td><td>15.06.2</td></tr> <tr><td>IL-6 WB</td><td>31.05.2</td></tr> <tr><td>QC1</td><td>31.05.2</td></tr> </tbody> </table>	Test	Date	IL-6 WB	15.06.2	LBP	15.06.2	IL-6 WB	15.06.2	IL-6	15.06.2	LBP	15.06.2	IL-6 WB	31.05.2	QC1	31.05.2						
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QC1	31.05.2																						

A value of 100 pg/mL IL-6 measured by the Milenia® QuickLine IL-6 Whole Blood has been proven to be an appropriate clinical cut-off.

Literature Recommendation

1. Franz AR, Steinbach G, Kron M, and Pohlandt F. Reduction of unnecessary antibiotic therapy in newborn infants using interleukin-8 and C-reactive protein as markers of bacterial infections. Pediatrics 1999; 104 (3): 447-453.
2. Krüger M, Nauck MS, Sang S, Hentschel R, Wieland H, Berner R. Cord Blood Levels of Interleukin-6 and Interleukin-8 for the Immediate Diagnosis of Early-Onset Infection in Premature Infants. Biol Neonate 2001; 80: 118-123.
3. AWMF online "Leitlinien der Gesellschaft für Neonatologie und Pädiatrische Intensivmedizin"

Point-of-Care-System for Intensive Care Medicine



- Sample volume only 50 µL whole blood for IL-6
- Rapid, simple, flexible
- Results within 30 minutes
- Low overhead costs
- Objective interpretation and quantitative results (pg/mL) with PicoScan



Order Informations

Parameter	Order Code	Package Size
New Milenia® QuickLine IL-6 Whole Blood	MQL6B 1	20 tests
Further Products:		
Milena® QuickLine IL-6 (Serum)	MQL6 1	20 tests
Milena® QuickLine IL-8	MQL8 1	20 tests
PicoScan System	PicoScan	System + Software

Under development: CRP, S100, TNF, IP-10, IFN- γ

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