NEONATAL SEPSIS · OCTOBER 2026

Blood culture missed most early sepsis deaths.

In 15,290 very low birth weight infants, umbilical cord PCR flagged almost twice as many.

REFERENCES

Hanenberg L, Fortmann I, Rupp J, et al; German Neonatal Network. Umbilical cord quantitative polymerase chain reaction and sepsis complications for neonates. JAMA Netw Open. 2026;9(10):e2637159.

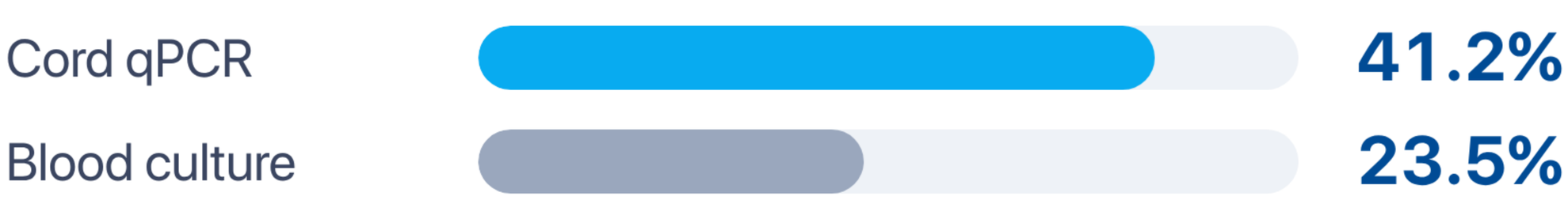
Gentamicin: drug information. In: NeoFast app, Antibiotics. Micromedex; Lexicomp Pediatric and Neonatal Dosage Handbook, 30th ed., 2023.

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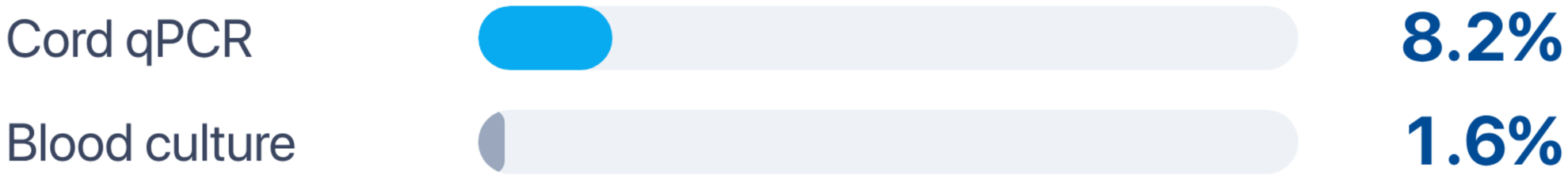
THE NUMBERS

Sensitivity, cord qPCR vs blood culture

Sepsis death within 7 days (n = 34)



Grade IV IVH (n = 548)



Positive qPCR: adjusted OR 14.9 for sepsis death and 1.89 for grade IV IVH.

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WHAT WAS TESTED

Central cord tissue, not cord blood

3.6%

qPCR positive

0.6%

blood culture positive within 72 h

Multiplex qPCR for Enterobacteriaceae and group B streptococcus, confirmed in a second run. German Neonatal Network, 67 NICUs.

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NOT AT THE BEDSIDE YET

Read it as a signal, not a test

Retrospective: stored tissue from 2009 to 2021, tested in 2025–2026.

Two pathogen groups only, with possible contamination at delivery.

Low PPV: 0.03 for death. 97% of positive infants did not die of sepsis.

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PRACTICAL RULE

A negative blood culture does not rule out sepsis. Decide on the infant, and start empirical antibiotics on time, at the right interval.

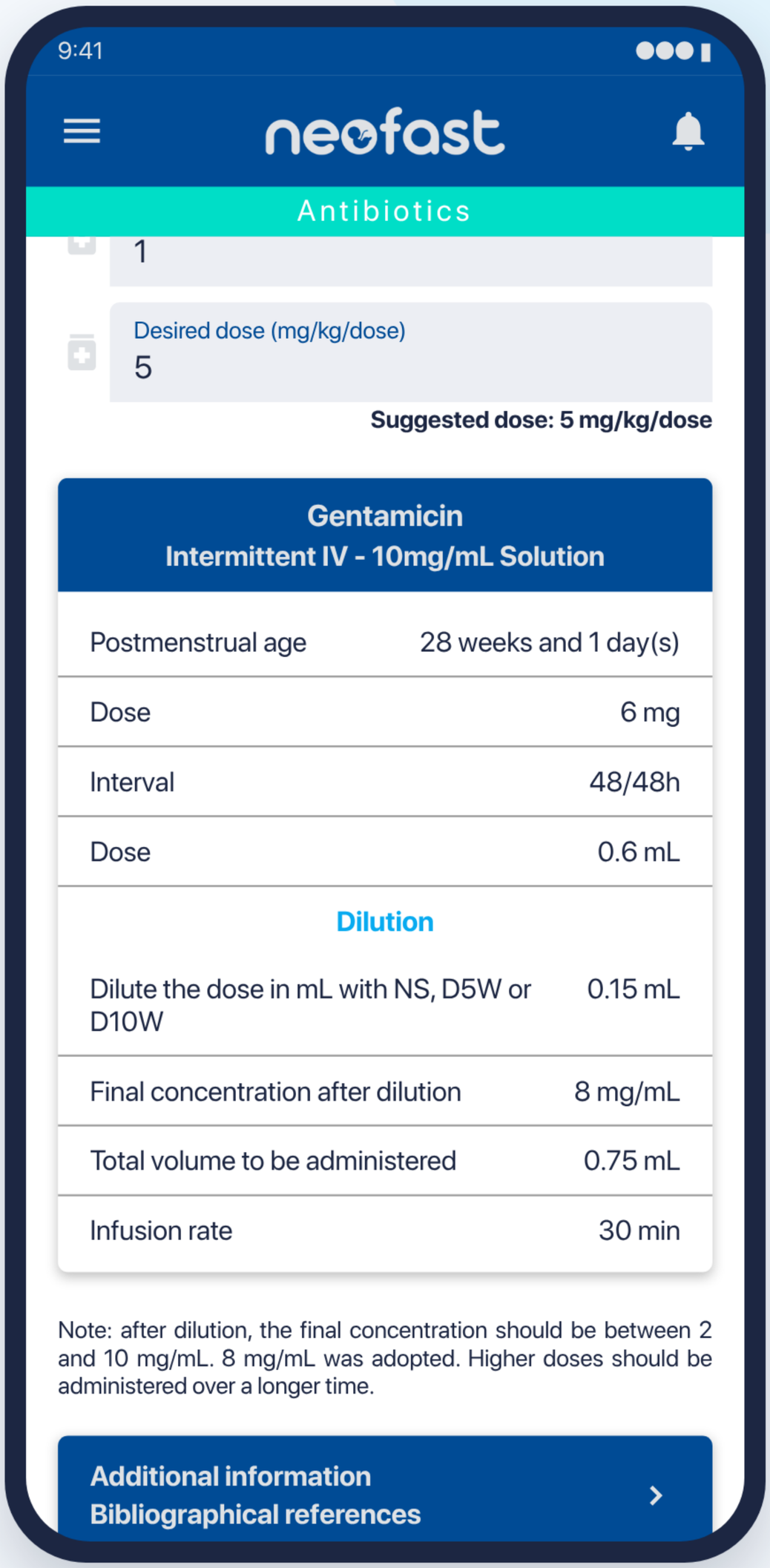
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NEOFAST · GENTAMICIN, 28 WEEKS, DAY 1, 1.2 KG

Gestational and postnatal age



Interval and dilution



NeoFast sets the interval from postmenstrual and postnatal age, and builds the dilution step by step.

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Neonatal calculations with the source cited on every screen.

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The app calculates. The prescriber decides.