

MOMENTUM

BIO SCIENCE

Revolutionising Routine Sepsis Diagnostics



Company Overview

- Focused on rapid assessment of bloodstream infection directed towards sepsis and the fight against 'superbugs'
- 14 staff based near Oxford (R&D, marketing) and Cardiff (manufacturing, admin)
- 7 patent families owned by Momentum, one granted US/EU; 3 licensed from ZEUS Scientific now being assigned
- Funded to date through a combination of equity investors and grants totaling £6.2m & £1.4m respectively
- Manual Cognitor® Minus CE marked product introduced and generating data to build market awareness



INVESTORS



The Problem

Sepsis costs the US healthcare
\$20bn per year

Sepsis claims more lives than
any cancer

Sepsis accounts for 1.6m US
admissions

110m blood cultures tests
annually

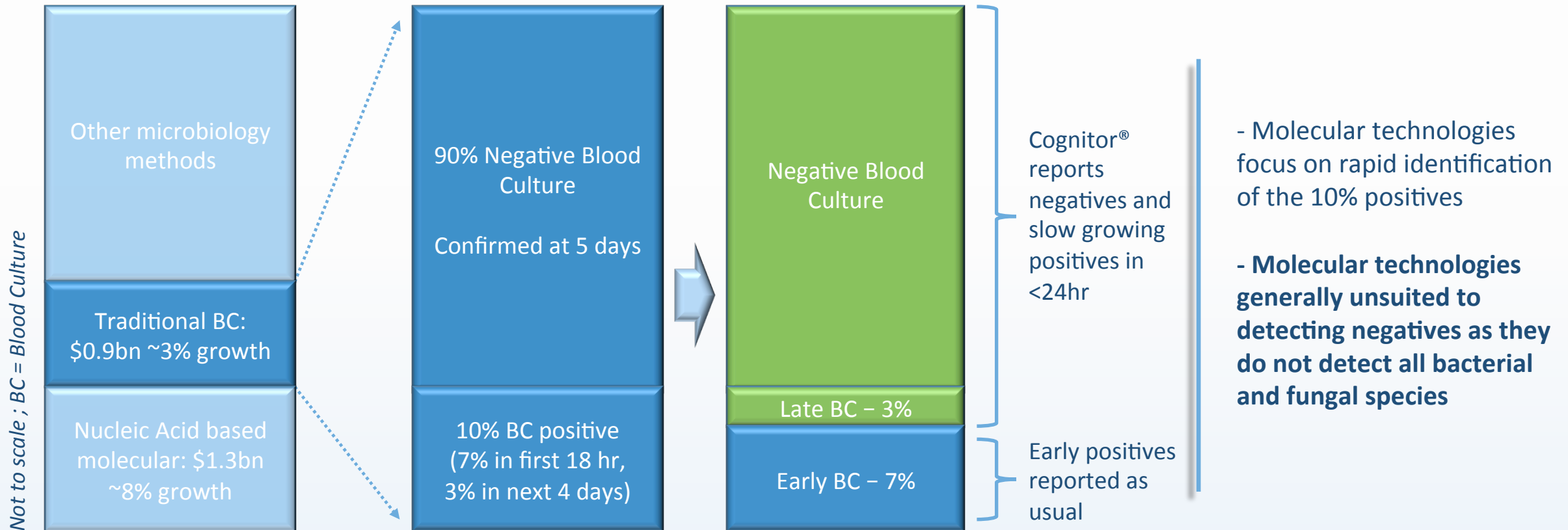
90% of blood cultures results
are negative

Negative patients remain on
unnecessary antibiotics for up
to 5 days

Reducing the use of unnecessary antibiotics is a key feature of government policy globally. The O'Neill report specifically highlights rapid diagnostics as a key recommendation

The Market

Microbiology Market:
\$4.8bn ~3.5% growth



The automated Cognitor® System addresses the 93% of patients waiting for positive identification and negative confirmation through a strategy of targeted adoption

Effective patient management currently remains limited by lengthy time to result of blood culture

The Technology: ETGA

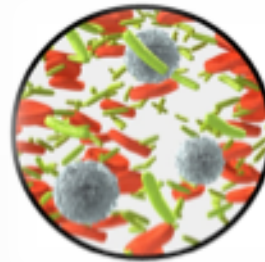
ETGA is able to combine the speed and sensitivity of PCR with the universal nature of blood culture

A superior limit of detection (1,000 – 10,000x) compared to blood culture allows Cognitor® to pick up infections blood culture misses

Further applications include differentiation and categorisation of positive pathogens and antimicrobial susceptibility testing

Enzymatic Template Generation and Amplification

The speed & sensitivity of PCR with the universal nature of blood culture



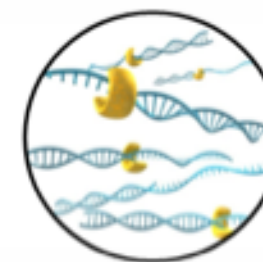
Specimen:
Suspected of containing bacteria or fungi



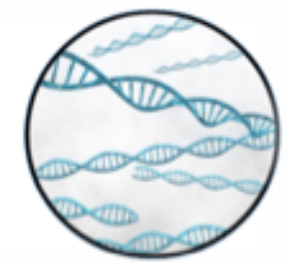
Sample clean-up:
Following sample lysis, residual enzymes outside the target microorganisms are inactivated.



Microbial lysis:
Target microorganisms are lysed. DNA-modifying enzymes, including DNA polymerase, are released.



Substrate modification: The DNA-modifying enzymes are incubated with synthetic DNA substrate. This is then modified to create a template for PCR.



PCR template:
This is amplified & measured using qPCR. If there are no microorganisms present, the PCR target will not be created and amplification will not occur.

Momentum owns patents covering the detection of bacteria & fungi, the absence of microorganisms & detection of viable organisms.

The Patients

Early Onset Sepsis in Neonates



- Avoid toxic antibiotics
- Get mother and baby home early
- Meet NICE guidelines

Adult Intensive Care



- Significant critical care costs
- Reduces patient burden
- Supports stewardship initiatives

Trial Data:

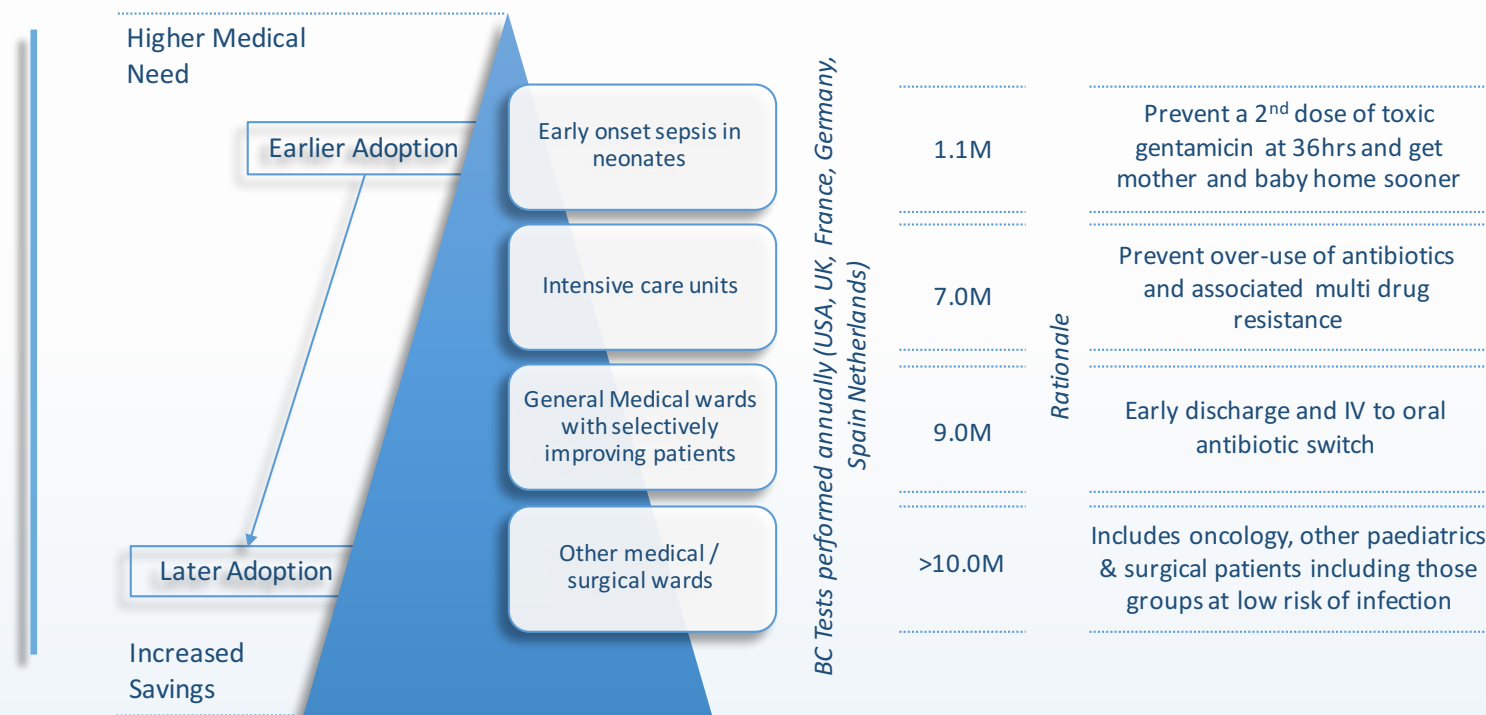
- **Sheffield:** 124 Neonates
- **Basingstoke & Winchester:** 246 patients
- **UCLH:** Adult ICU
- **Alder Hey:** Paediatric Oncology / Haematology

A comprehensive trial plan to include health economics will support a rapid adoption strategy of the automated Cognitor® System

The Strategy

- **Focus:** Early onset sepsis in neonates and patients in
- **Automate:** The Cognitor® System will run up to 18 tests / day in a single shift
- **Demonstrate:** Clinical & economic utility in targeted patient groups
- **Scale-up:** Achieve FDA 510(k) clearance & CE Mark in 2019 for automation

Momentum Commercial Adoption Pyramid



Through focus and targeted adoption, Momentum is able to develop key data, generate support from KOLs and build a strong platform for continued growth

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