



ALI  
FAX

# RAP SEPSIS



IN ONLY  
3 HOURS

RAPID AST PHENOTYPIC  
METHOD

Clinically Useful Results

[www.alifax.com](http://www.alifax.com)

# SEPSIS

Sepsis is a constantly increasing health emergency, linked to multiresistance and hospital infections, with high cost impact for the healthcare system



## COSTS

**2.250 € / DAY**

COST IN INTENSIVE CARE UNIT

**30.000 €**

ESTIMATED COST FOR A CASE OF SEPSIS

**1,5 TRILLIONS €**

WORLDWIDE COST

**26 MILLIONS**

Cases in the world

**1 DEATH**

every 2 minutes

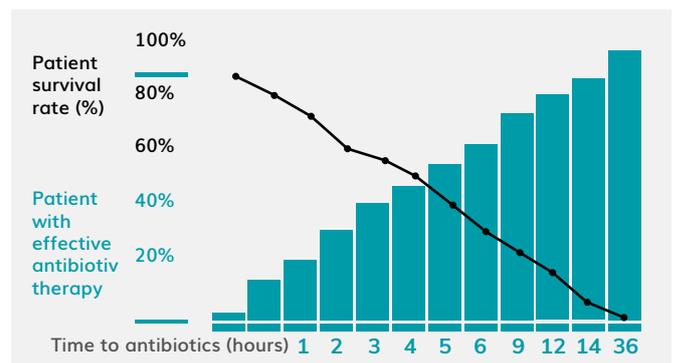
**1 CASE OUT OF 5**

is fatal

## In case of SEPSIS,

for every hour of inappropriate therapy, **mortality rises by**

**7,5%**





|                       | <b>RAP SEPSIS</b><br>Phenotypic                         | <b>TRADITIONAL AST</b><br>Phenotypic                           | <b>MOLECULAR BIOLOGY</b><br>Genotypic                                       |
|-----------------------|---|--|---|
| Turnaround time (TAT) | <b>3 or 5 hours</b>                                     | 48-72 hours  | 1-2 hours   |
| Report                | Sensitivity and Resistance                              | Sensitivity and Resistance                                     | Only known resistances  |
| Utility of the result | <b>RAP SEPSIS provides clinically useful results</b>    | Useful for definitive confirmation and epidemiological studies | Clinically useful results related to resistance. No sensitivity information |
| Antibiotic panel      | <b>CUSTOMIZABLE for patient</b>                         | Fixed panels   | Not applicable  |
| Automation            | <b>Walk-away system inoculum, McFarland and reading</b> | Semi-automatic reading   | Semi-automatic  |
| Sample                | Positive blood culture or isolated colonies             | Isolated colonies  | Positive blood culture  |
| Cost                  | €€€   | €€   | €€€€€   |



**Fast** as molecular  
**Reliable** as reference phenotypic method

METHOD COMPARISON





# RESULTS IN ONLY 3 OR 5 HOURS

RAP SEPSIS allows the microbiologist to define the customized antibiotic panel according to Gram staining or rapid ID (I-dOne), clinician's input and patient's specific needs

- 1** 25 µl of blood culture in the enrichment vial  1 HOUR\*
- 2** Enrichment vials are incubated up to 0.5 McFarland and then tested in automation with customized antibiotic panels



100 µl of 0.5 McFarland suspension + 200 µl of antibiotic

## RESULTS IN ONLY 3/5 HOURS

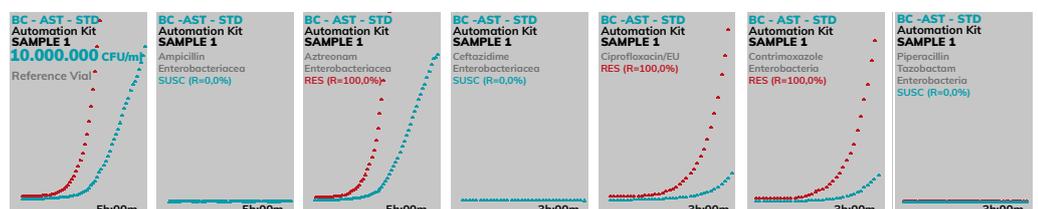
"the overall agreement vs reference methods is 97%" (16)



Reference Ab 1 Ab 2 Ab 3 Ab 4 Ab 5 Ab 6

Results are expressed as a percentage of antibiotic resistance and classified as:

- Resistant
- Intermediate
- Sensitive



\*The time to reach the 0.5 McFarland depends on bacterial species and concentration.

## Life-saving test

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- Crucial for the resolution of the disease



## Personalized diagnostics

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- Therapy change / confirmation
- Daily patient monitoring
- Optimization of patient management



## Lab automation

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- Automation of clinical AST
- Simultaneous management of multiple patients
- Standardized AST method
- Complete integration of ALIFAX technology with the current methods present in the laboratory



## Healthcare system economic efficiency

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- Decrease of patient length of stay in intensive care unit
- Cost reduction of hospitalization, therapies and diagnostics
- Restraint of hospital and multi-resistant infections
- Meets the requirements of the Antimicrobial Stewardship program



ADVANTAGES



# “CLINICALLY USEFUL RESULTS”

## ALIFAX ANTIBIOTIC SUSCEPTIBILITY TESTING ON POSITIVE BLOOD CULTURE

1. Check the efficacy of the empiric therapy administered to the patient
2. Detect the second-line antibiotics
3. Monitor the efficacy of the antibiotic treatment in use

**CARLOS  
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"In this study including 115 BSIs, Alfred AST® system proved to be an adequate method to **test Antimicrobial susceptibilities** of the bacterial isolates from positive blood cultures with **an excellent categorical correlation (97.1%) with the reference method.**" (broth microdilution method)

Eur J Clin Infect Dis. 2019 (16)

**"In 85% of cases the Alfred AST information was considered clinically useful by Infectious diseases** consultants confirming the ongoing therapy or allowing changes in a very RAPID time, thus improving the pathology resolution and reducing the Health System costs"

Alifax Sepsis Summit - Madrid 2018

**BRUNO  
VIAGGI**

MD Intensive Care  
Unit CTO Careggi  
(Uni. Florence), Italy

**"95% of what I do is "off-label", none of my patients is standard and 1 out of 2 dies** therefore I need to interact with the microbiologist to get all the information possible and imaginable to resolve the situation in that moment"

"The microbiologist is the only consultant in intensive care that can address the therapeutic choices and change the outcome of the patient"

"The first experience of a new method tested in Florence as the clinical ALIFAX susceptibility testing provides absolutely important information that can be used in the clinical practice to customize therapy"

AMCLI - Rimini 2014

**TIMOTHY  
PLANCHE**

St. George  
University Hospital London UK

**"The median time to susceptibility results** from blood culture flagging positive **was 6.3 h vs 20 h (p < 0.01) for Alfred system vs BD Phoenix™.**"

BMC Microbiology 2019 (1)

**"Alifax AST is a RAPID PHENOTYPIC method.** Testing for resistance genes is not enough. The absence of a resistance gene doesn't mean that the organism is susceptible and conversely, if a gene is present doesn't mean necessarily that a microorganism is resistant."

Alifax Sepsis Summit - Madrid 2018



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**INSIDE INNOVATION**



**RAPID AST PHENOTYPIC METHOD**

**CLINICALLY USEFUL RESULTS  
IN 3 HOURS**

**ALIFAX S.r.l.**

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