



PANDORA

ID - 25

TIME TO WEBINAR IN INFECTIOUS DISEASES

PROGETTO DI FORMAZIONE

Anno Accademico

24/25



Fondazione IRCCS
Ca' Granda
Ospedale Maggiore
Policlinico

Sistema Socio Sanitario



Regione
Lombardia

ASST Fatebenefratelli Sacco

INFEZIONI GRAVI DEL TORRENTE CIRCOLATORIO: QUALI VANTAGGI DALLE NUOVE MOLECOLE

Giovanni De Capitani

Università Statale degli Studi di Milano

Scuola di Specializzazione in Malattie Infettive e Tropicali

CASO CLINICO

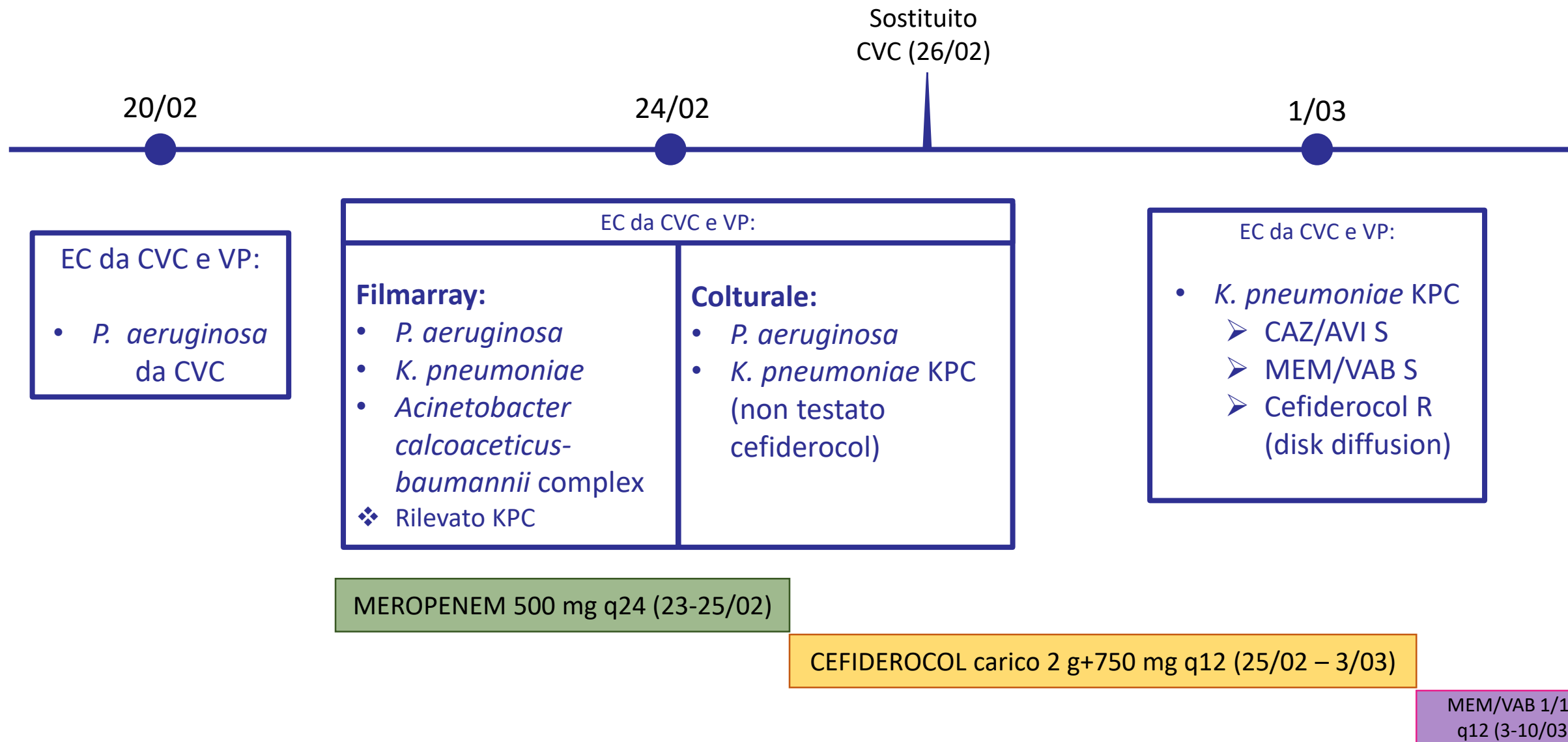
Donna di 77 anni, ricoverata dal 31/01/2025 per **batteriemia da *Streptococcus pyogenes*** a partenza da cellulite della gamba destra, trattata con cefotaxime + clindamicina.

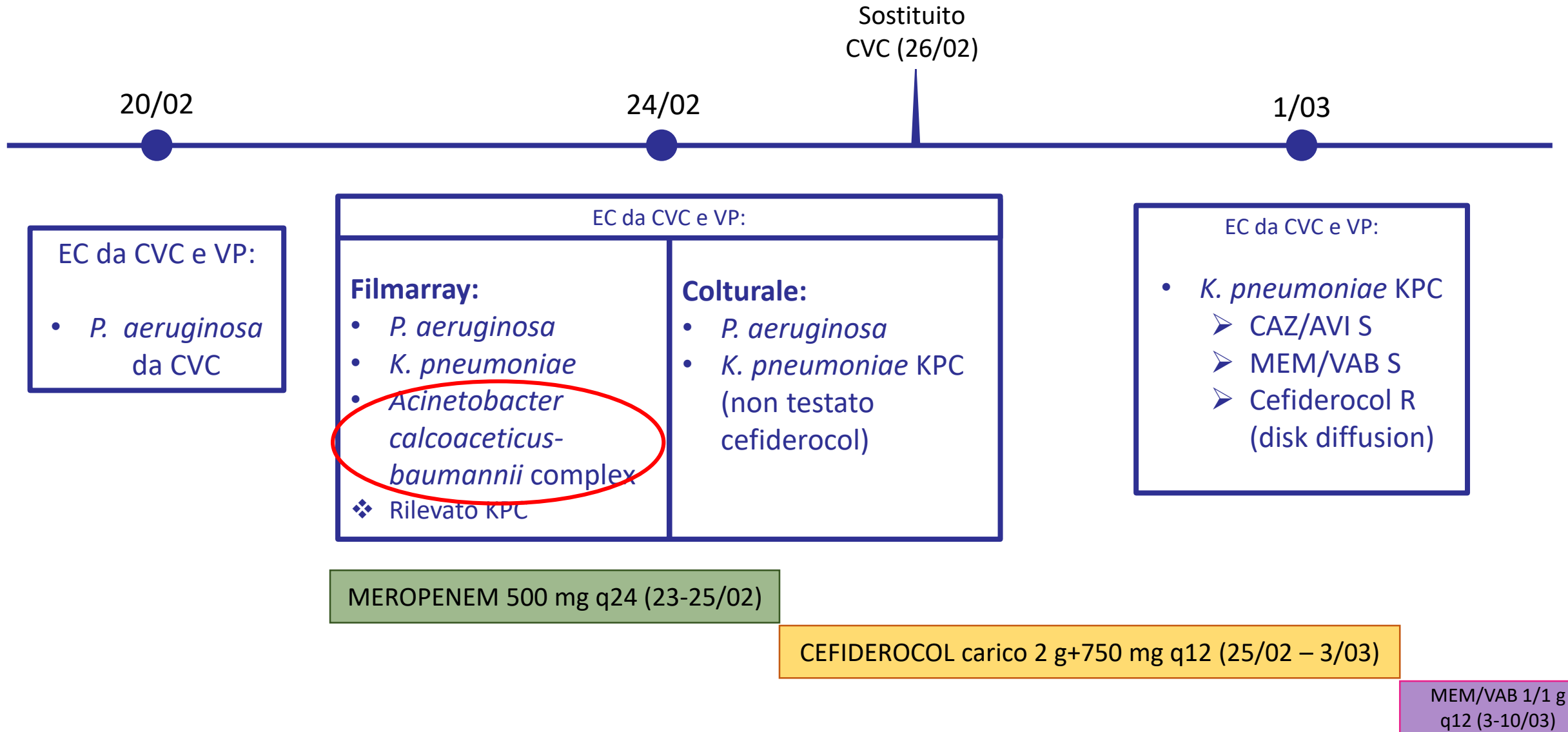
In anamnesi:

- Diabete mellito tipo 2
- Ipertensione
- Dislipididemia
- Insufficienza renale cronica
- Dubbia allergia a ceftriaxone ed azitromicina

Ricovero complicato da:

- **HAP** trattata con piperacillina/tazobactam + linezolid (7/02 – 11/02 > interrotto per reazione allergica)
- **EPA e IRA** su IRC con necessità di trattamento emodialitico (10/02 – 3/03)
- **Infezione da C. difficile** trattata con vancomicina + metronidazolo (14/02 – 28/02)

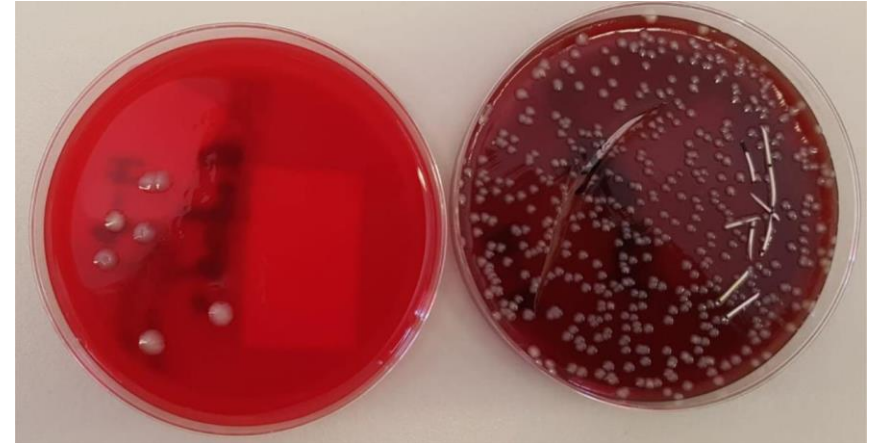




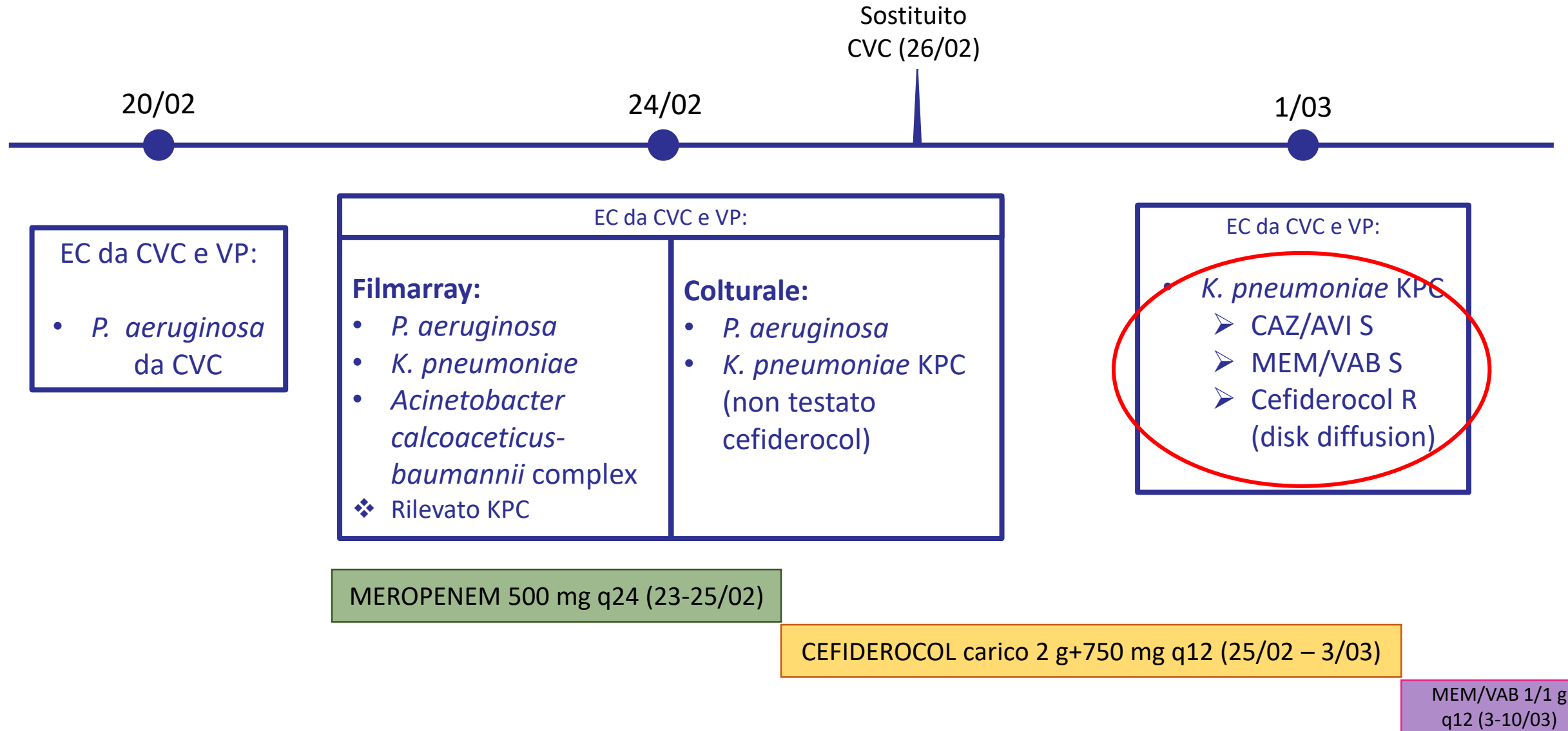
FILMARRAY - COLTURALE



VS



- Elevato grado di concordanza
 - 95-98% nelle BSI monomicrobiche⁽¹⁾
 - 72-89% nelle BSI polimicrobiche^(2,3,4)
- Principali cause di discordanza
 - Microorganismi non inclusi nel pannello FilmArray
 - BSI polimicrobiche
 - Identificazione di DNA non vitale al FilmArray



COME CI SPIEGHIAMO QUESTO ANTIBIOGRAMMA?

Germe >	Klebsiella...			
Antibiogramma >	AST-NS63			
Data >	01/03/2025			
Antibiotico	RSI	MIC	RSI	MIC
Amoxicillina/ac.clav (altre diagnosi)	R	>32		
Amoxicillina/ac.clav (ivu non complicate)	R	>32		
Ampicillina	R	>16		
Ampicillina/sulbactam	R	>16		
Aztreonam	R	>32		
Cefepime	R	>16		
Cefiderocol	R			
Cefotaxime	R	>32		
Ceftazidime	R	>32		
Ceftazidime/avibactam	S	4		
Ceftolozane/tazobactam	R	>16		
Ceftriaxone	R	>32		
Cefuroxime - Sodio	R	>32		
Cefuroxime-Acetil	R	>32		
Ciprofloxacina	R	>2		
Ertapenem	R	>4		
Gentamicina	R	>8		
Imipenem	R	>8		
Imipenem/ relabactam	S	0.5		
Levofloxacina	R	>4		
Meropenem	R	>8		
Meropenem/ vaborbactam	S	<=0.5		
Moxifloxacina	R	>4		
Piperacillina/tazobactam	R	>64		
Tobramicina	R	>8		
Trimetoprim/Sulfam.	S	<=20		

1. KPC

- Wild type
- Mutato (es KPC-109) ⁽⁵⁾



2. Meccanismi non enzimatici

- Repressione/mutazione di geni codificanti sistemi di trasporto del ferro (es. CirA) ⁽⁶⁾
- Mutazioni di proteine legati le penicilline



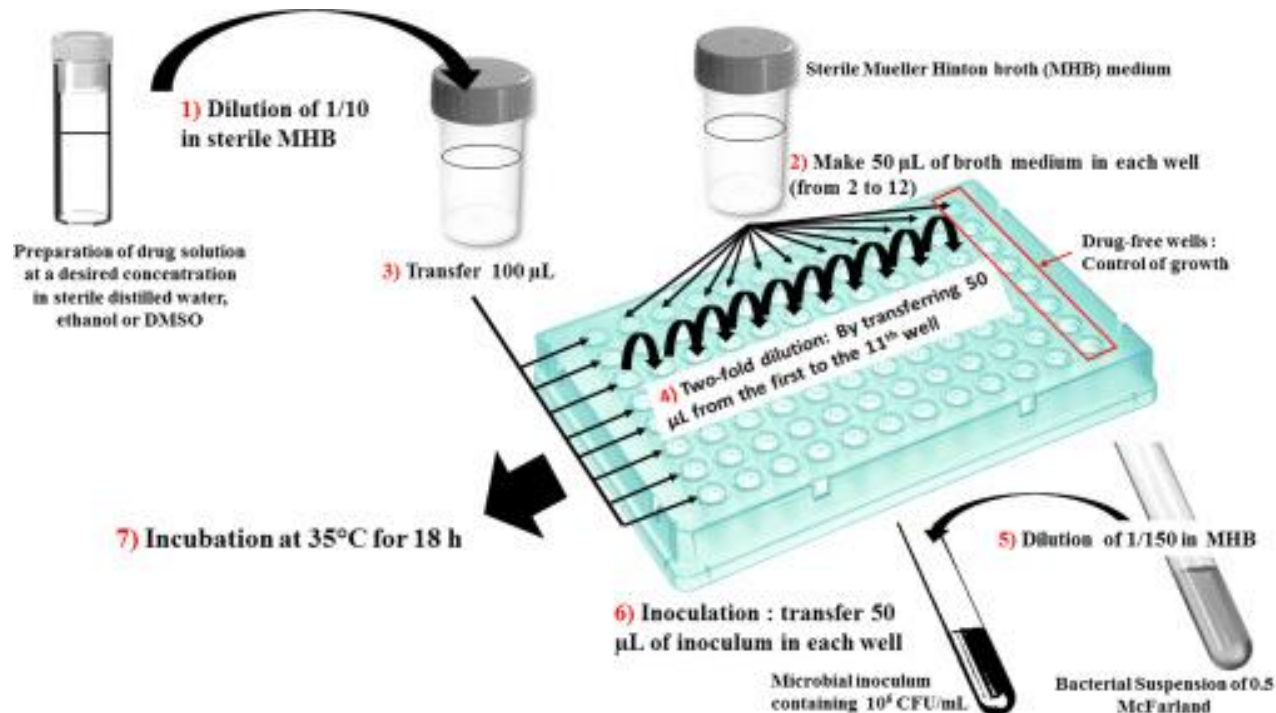
3. Falso positivo al test di resistenza per cefiderocol



TESTARE LA RESISTENZA A CEFIDEROCOL

GOLD STANDARD:

Microdiluizione in brodo ferro-depleto
(iron-depleted cation-adjusted Mueller-Hinton broth, ID-CAMHB)⁽⁷⁾



- Tecnicamente complesso
- Non disponibile in formato commerciale standardizzato
- Molto costoso

In Vitro Activity of the Siderophore Cephalosporin, Cefiderocol, against a Recent Collection of Clinically Relevant Gram-Negative Bacilli from North America and Europe, Including Carbapenem-Nonsusceptible Isolates (SIDERO-WT-2014 Study)

Meredith A Hackel ¹, Masakatsu Tsuji ², Yoshinori Yamano ³, Roger Echols ⁴, James A Karlowsky ⁵, Daniel F Sahn ⁶

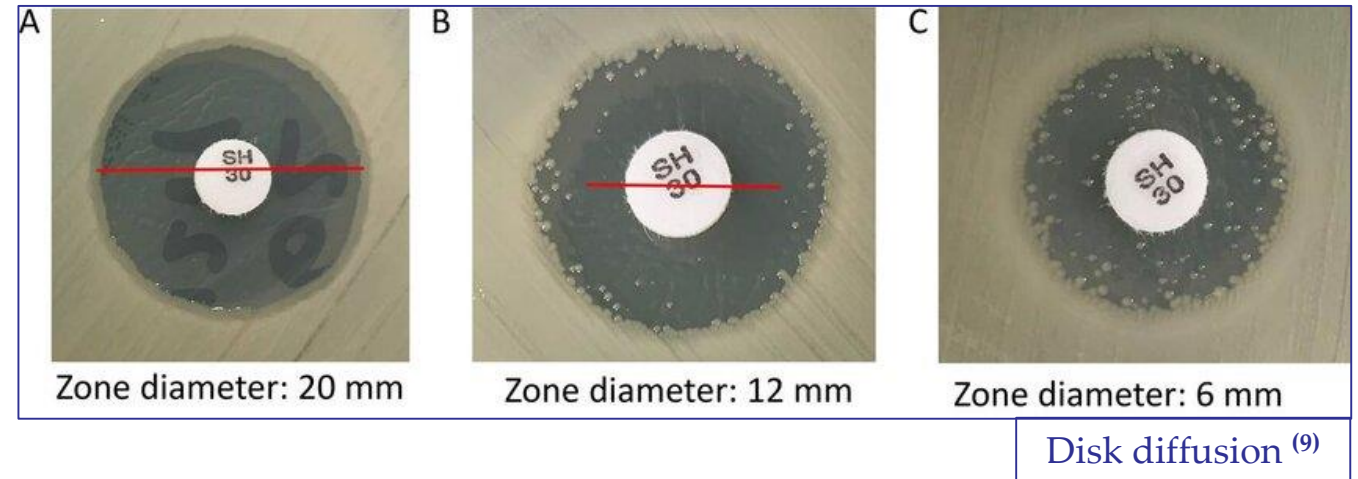
BMD vs DISK DIFFUSION

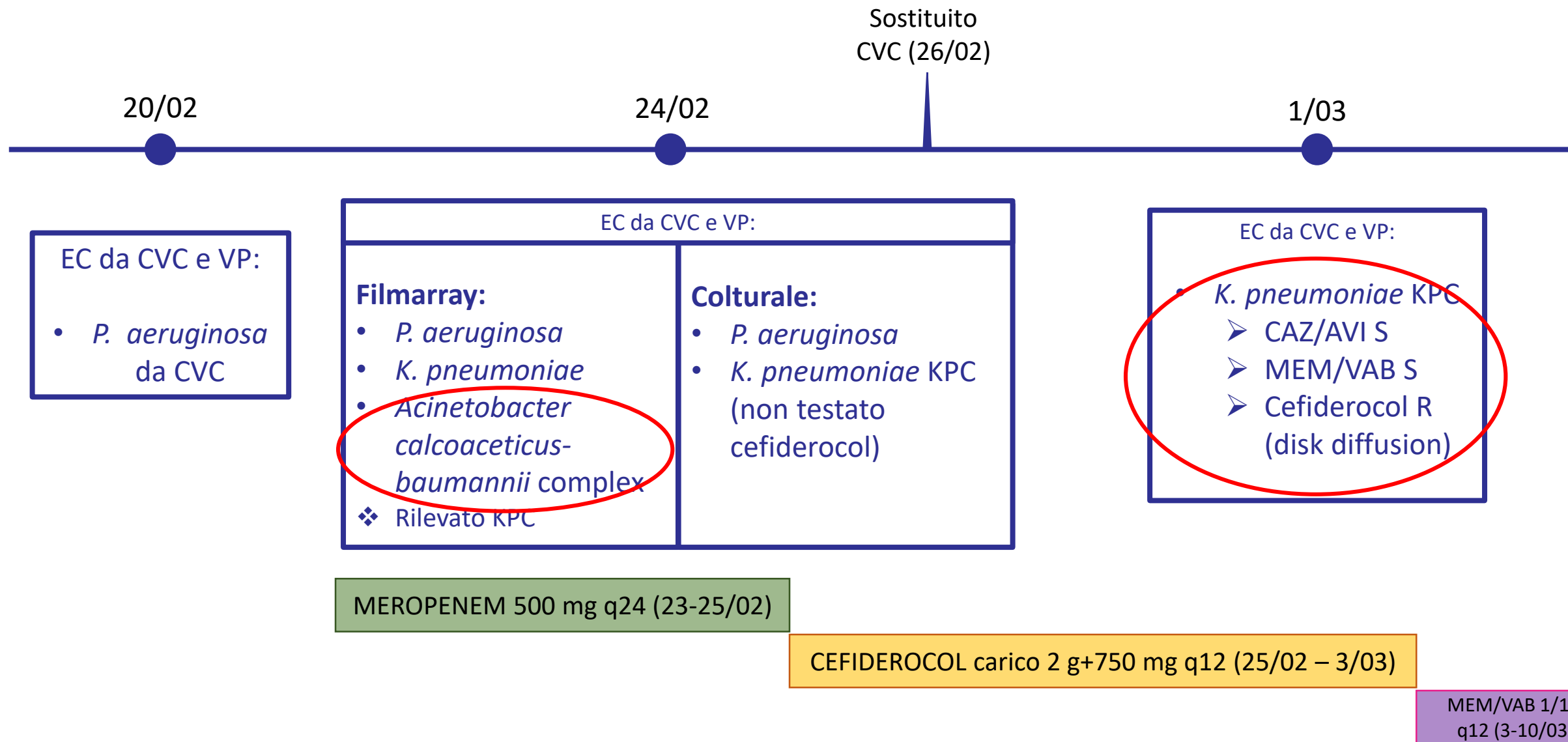
Comparison of disk diffusion, MIC test strip and broth microdilution methods for cefiderocol susceptibility testing on carbapenem-resistant enterobacterales

Rémy A Bonnin ¹, Cécile Emeraud ², Agnès B Jousset ², Thierry Naas ², Laurent Dortet ³

	BMD commerciale	Disk diffusion
Concordanza con gold standard	95%	81.7%
Very major errors (false sensibilità)	2.8%	23.3%
Major errors (false resistenze)	1.6%	4.9%
Risultati in area di incertezza (ATU)	-	21%

«Disk diffusion might be useful for screening, but many of these CRE have to be re-tested using BMD to assess definitive categorization» ⁽⁸⁾





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GRAZIE PER L'ATTENZIONE