

# **A Recent Trend of Causal Bacteria and Antibiotic Therapy in Patients with Pyogenic Spondylitis**

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# Patients

**83 patients with pyogenic spondylolitis treated in this hospital from 2000 to 2010 were included in this study**

**Males 47 Females 36**

**The age of the patients ranged from 38 to 84 years with an average of 64.1 years**

**Affected region: Cervical 4, Thoracic 28, Lumbar 51**

# Methods

Causal bacteria was examined by the culture of blood, pus or biopsy tissue

## 1) Bacterial detection rate

## 2) Factors related to bacterial detection

\*Antibiotic use before examination

\*Bone destruction

\*Phase of disease development

\*Abscess

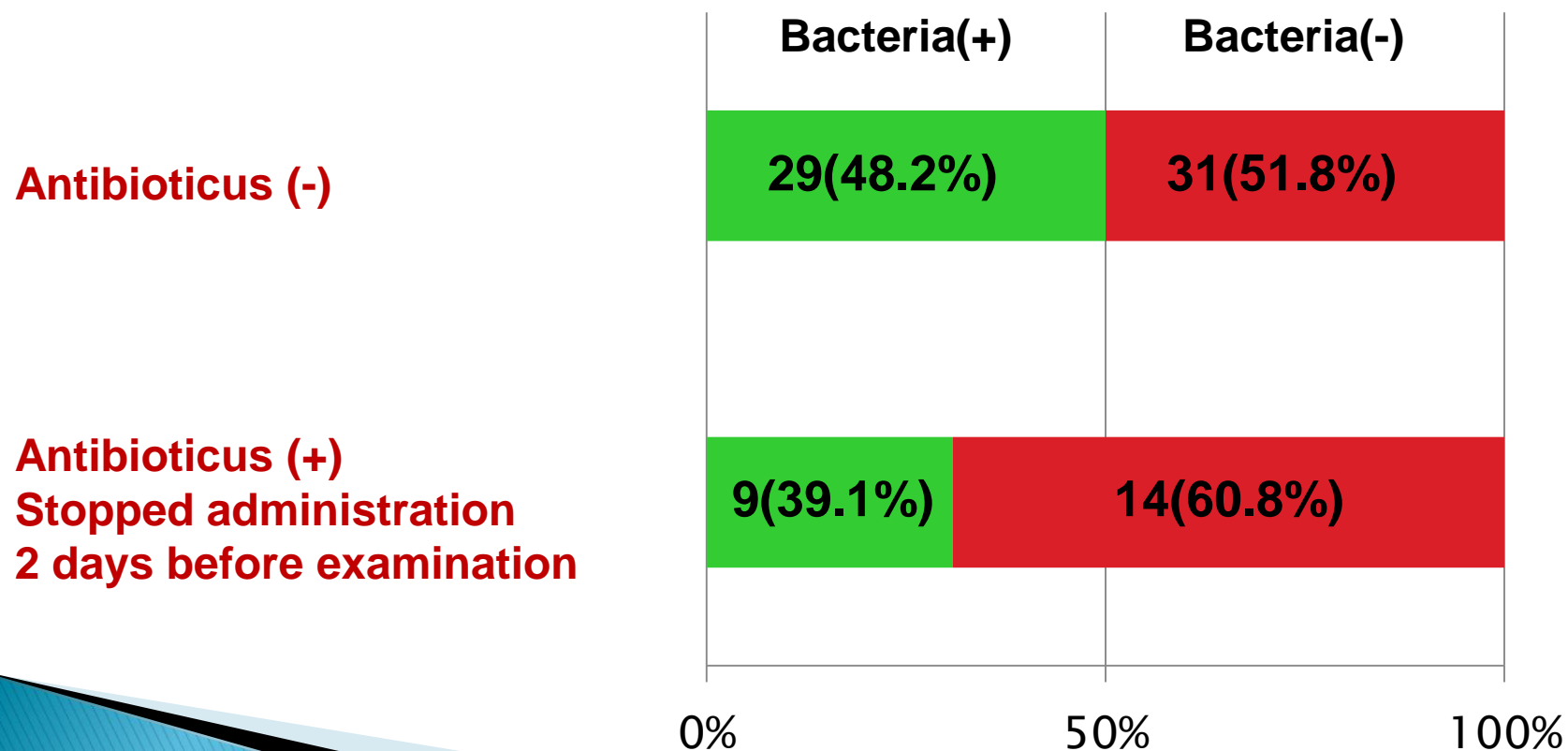
\*Inflammatory sign

## 3) Bacterial species

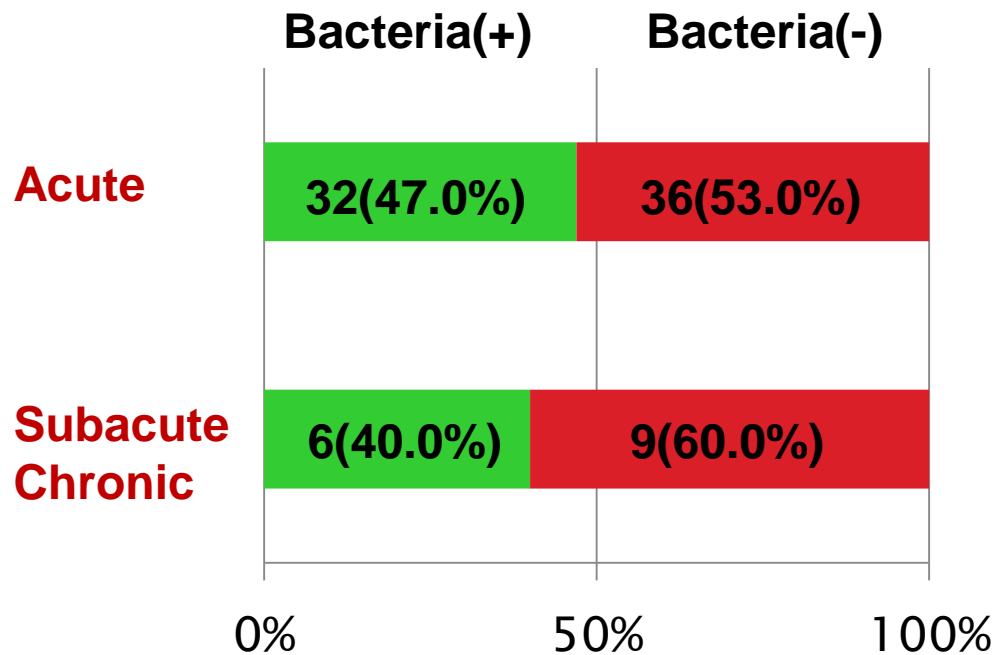
## 4) Antibiotic sensitivity

**Bacterial detection rate  $38/83=45.8\%$**

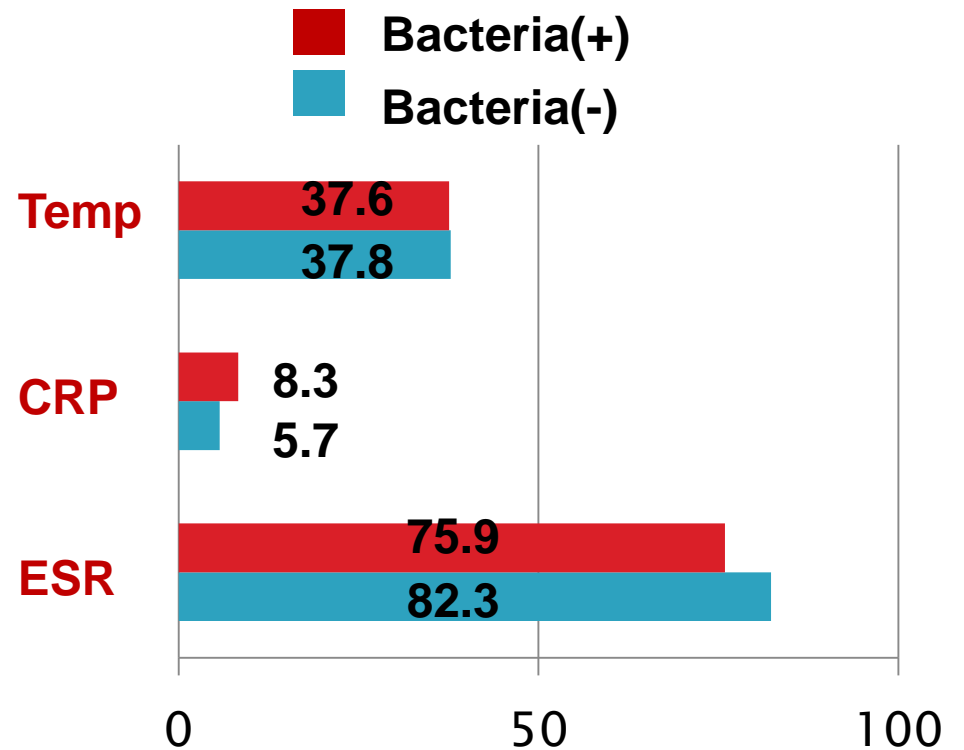
## **Antibioticus before examination v.s. Bacterial detection rate**



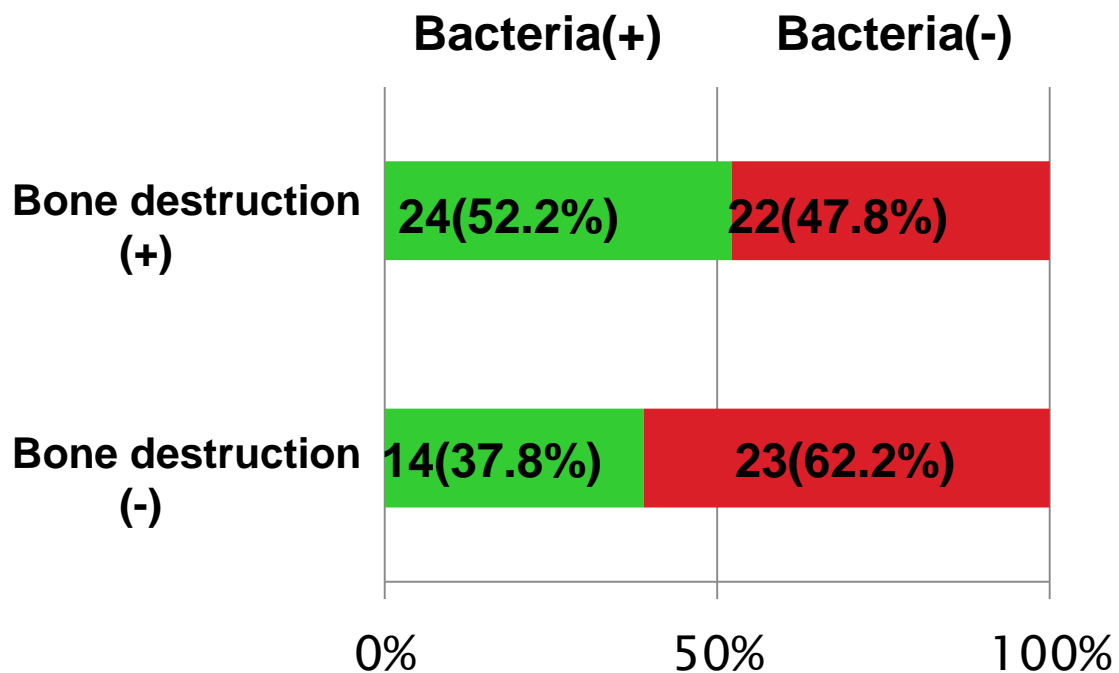
## Phase of disease development vs. Bacterial detection rate



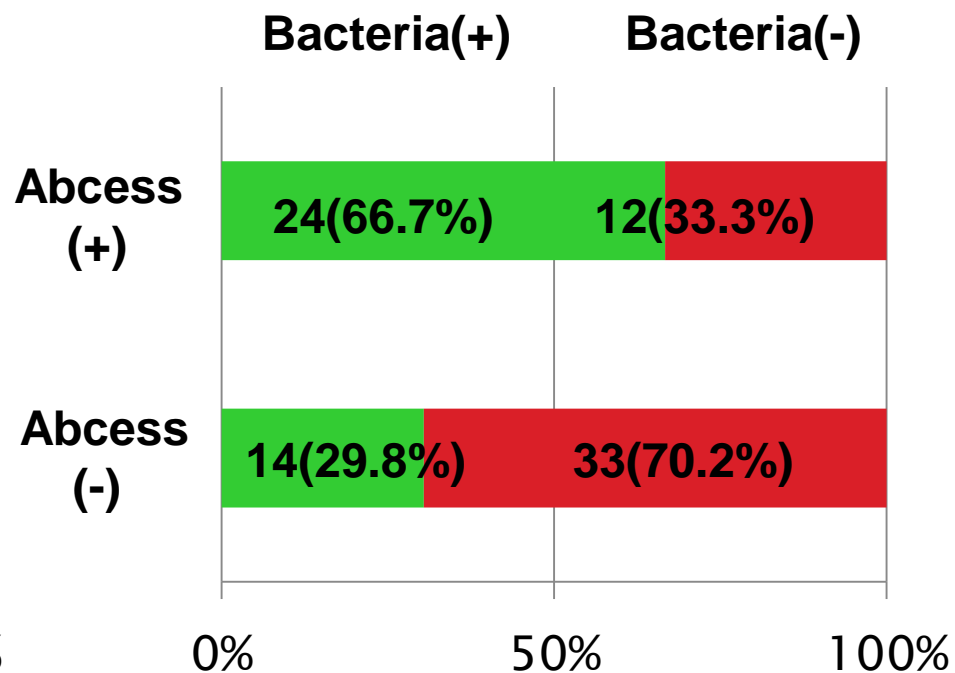
## Inflammatory sign vs. Bacterial detection rate



## Bone destruction vs. Bacterial detection rate



## Abcess vs. Bacterial detection rate



# Bacterial Species

## Gram positive bacteria

**27**  
**(71.0%)**

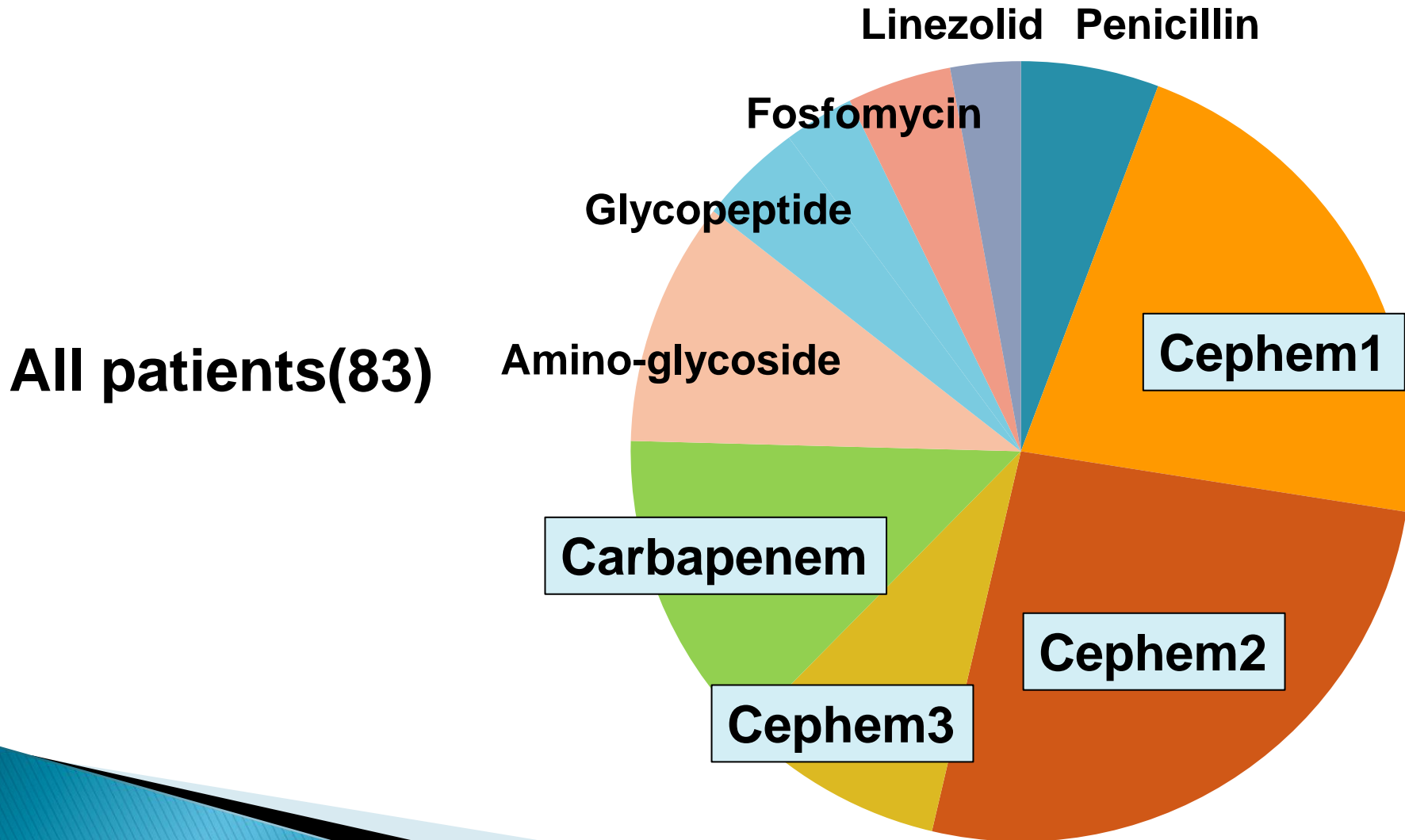
<b>MRSA</b>	<b>9</b>
<b>Staphylococcus aureus</b>	<b>8</b>
<b>Staphylococcus epidermidis</b>	<b>2</b>
<b>CNS</b>	<b>2</b>
<b>Streptococcus(Group B)</b>	<b>2</b>
<b>Enterococcus</b>	<b>4</b>

## Gram negative bacteria

**11**  
**(29.0%)**

<b>E.Coli</b>	<b>5</b>
<b>Pseudomonas</b>	<b>4</b>
<b>Serratia</b>	<b>2</b>

# Antibiotic type (Injection)





# MRSA

## Antibiotic sensitivity and administered antibiotics

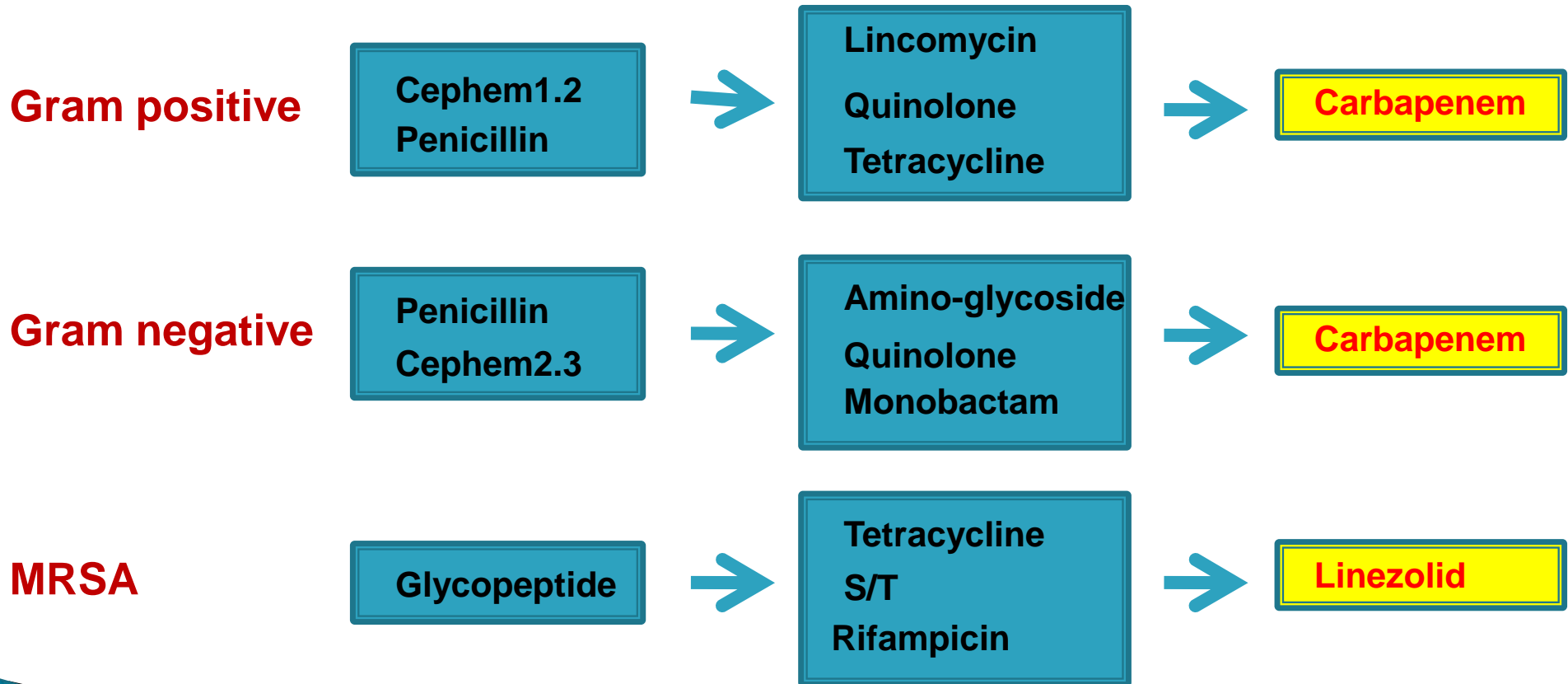
	MRSA	MRSA	MRSA	MRSA
Penicillin	R	R	R	R
Cephem	R	R	R	R
Carbapenem	R	R	R	R
Tetracycline	S	I	R	R
Amino-glycoside	S	S	S	R
ST	S	S	S	S
Glycopeptide	S	S	S	S
Linezolid		S	S	S

# Gram-negative bacteria

## Antibiotic sensitivity and administered antibiotic

	Serratia	E.coli	E.coli	Pseudomonas
Penicillin	R		R	S
Cephem	R	S	S	
Carbapenem	S	S	S	S
Monobactam	R		R	S
Amino-glycoside	R	S	S	S
Quinolone	R		R	S
Fosfomycin	S	S	S	R

# Protocol of antibiotics for the causal bacteria



## **Message**

**it is important to follow up patients for any adverse effects and the emergence of resistant bacteria during treatment with these broad spectrum antibiotics.**

**None of the authors has any potential conflict of interest.**

