

# Assess your patients' $\beta$ -lactam allergy

A conversation guide for assessing  $\beta$ -Lactam allergies

$\beta$ -lactam antibiotics include penicilins (piptazo, cloxacillin, ampicillin), cephalosporins, and carbapenems

for Primary care physicians

## How did the patient react to the $\beta$ -lactam?

A

### Was it a serious, delayed, non-anaphylactic reaction? (non-IgE mediated)

Examples include:

- Toxic epidermal necrolysis (TEN)
- Acute interstitial nephritis (AIN)
- Stevens-johnson syndrome (SJS)
- Drug rash with eosinophilia + systemic symptoms (DRESS)
- Drug-induced hepatitis
- Hemolytic anemia
- Serum sickness

i

Patients with family members that have a penicillin allergy have **no increased risk of an allergy.**

Yes



#### Avoid All $\beta$ -Lactams

- Give alternate antibiotic and consult infectious disease physician or an allergist if a  $\beta$ -lactam is needed.

↓ No

B

### Was it an anaphylactic type reaction?

Examples include:

- Anaphylaxis
- Angioedma
- Wheezing
- Laryngeal edema
- Hypotension
- Hives/urticaria

Yes



#### Avoid all $\beta$ -lactams in same group

See cross reactivity list below

↓ No

C

### Was it a mild non-anaphylactic reaction?

Examples include:

- Rash (not hives)  
Nonpruritic, nonurticarial rashes occur in up to 10% of patients receiving  $\beta$  lactams. These rashes are usually not an allergic reaction.

Yes



#### Avoid that specific antibiotic

↓ No

D

### Did the patient have a non allergic adverse reaction?

Examples include:

- An unknown remote reaction - No hospitalization
- A non allergic intolerance
  - Yeast infection
  - Upset stomach
  - Nausea
  - Diarrhea

Yes



#### Use any $\beta$ -lactam

## $\beta$ -lactam cross reactivity list

Shared  $\beta$ -lactams side chains determine cross reaction risk

Cefazolin is structurally different therefore does not cross-react with other  $\beta$  lactams.

• Cefazolin	• Ertapenem • Imipenem • Meropenem	• Amoxicillin • Ampicillin • Cephalexin • Cefadroxil • Cefprozil	• Penicillin • Cefoxitin • Cloxacillin • Piperacillin-tazobactam
• Cefuroxime • Cefoxitin	• Cefotaxime • Ceftriaxone • Cefepime		
• Aztreonam • Ceftazidime			

#### Avoid others in the same group if the patient had a serious, delayed, non-anaphylactic reaction

Non-IgE- mediated / non-anaphylactic reactions include

- Toxic epidermal necrolysis (ten)
- Acute interstitial nephritis (ain)
- Stevens-johnson syndrome (sjs)
- Drug rash with eosinophilia + systemic symptoms (dress)
- Drug induced cytopenias
- Drug-induced hepatitis
- Hemolytic anemia
- Serum sickness