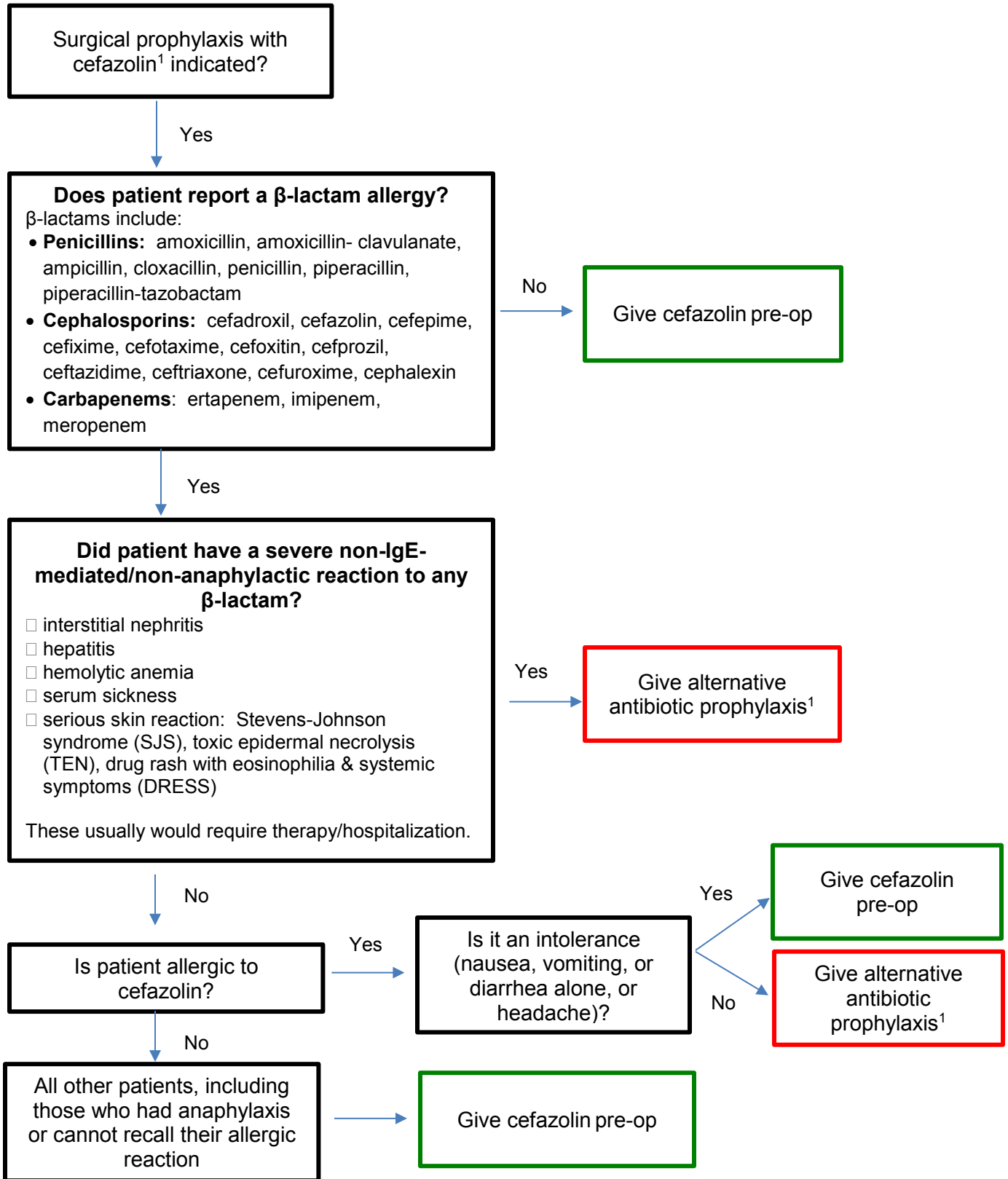


Algorithm for Surgical Prophylaxis & β -lactam Allergy



Footnotes

1. See [Alberta Health Services Surgical Prophylaxis Recommendations](#)

Q&A: Surgical Prophylaxis & β -lactam Allergy

See [β-lactam Allergy Antimicrobial Stewardship Backgrounder](#)

- Q1. In the information regarding side chains/cross-reactivity, it indicates that cefazolin does not have a similar side chain as any of the other β -lactams. **Does this mean that if a patient reports having a penicillin allergy (true IgE-mediated allergy/anaphylaxis or otherwise), that they should be able to receive cefazolin?**
- A. Yes, that is correct. The only contraindications to that patient receiving cefazolin are:
- an allergy to cefazolin, or
 - a history of a severe non-IgE-mediated/non-anaphylactic reaction, such as interstitial nephritis, hepatitis, hemolytic anemia, serum sickness, or severe skin reaction [e.g. Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), drug rash with eosinophilia & systemic symptoms (DRESS), but these are all very rare. Due to the severity of these non-IgE-mediated/non-anaphylactic reactions, difficulty treating them, and lack of data on likelihood of repeat reaction with another β -lactam, all β -lactams (including cefazolin) should be avoided.
- Q2. **Many patients who are asked about allergies are very vague with their description of symptoms, or say they don't know but were told they have an allergy, or don't remember because it has been so long ago. How do we handle these patients? Can we safely give cefazolin?**
- A. It is unlikely it was a serious allergy if they can't recall &/or it is not an allergy to cefazolin specifically, so it is safe to give cefazolin. True cefazolin allergy is not common, and cefazolin can be safely administered to these patients. The patient is in hospital & usually in the OR, so is under close observation and monitoring as well.
- Q3. **When would a patient need some of the other testing done to determine if allergic or not, such as skin testing or graded challenge?**
- A. If the patient reports an allergy to cefazolin, or a severe non-IgE-mediated reaction (see Q1ii), an alternative to cefazolin (e.g. clindamycin or vancomycin) should be used for prophylaxis according to the surgery being performed (see [Alberta Health Services Surgical Prophylaxis Recommendations](#)).
- Q4. **If a patient states that they felt like they were going to die or almost died after receiving penicillin or another B-lactam, i.e. an anaphylactic reaction – we would probably consider that to be a severe reaction and give vancomycin instead-correct?**
- A. No, there is no expected cross-reactivity between any other β -lactam and cefazolin as cefazolin has a distinct chemical structure. Unless the patient reports an allergy to cefazolin specifically, or a severe non-IgE-mediated reaction (see Q1ii), cefazolin can be given, i.e. even patients with anaphylaxis to penicillin, can be given cefazolin.
- Q5. **What if patient reports a non-severe reaction to cefazolin such as non-urticarial rash (not hives)? Can we still give them cefazolin or should we choose an alternative to cefazolin?**
- A. The literature is divided on this question. Some literature says it is safe to give the offending drug (cefazolin) again, others say to avoid the offending β -lactam but can give related/other β -lactams. For our purposes, we recommend using an alternative to cefazolin, after ensuring the reaction to cefazolin is not just an intolerance/side effect.