Table 7. Drug Allergy

Referral Guideline	Rationale	Evidence Type
Patients with a history of penicillin allergy who have a significant probability of requiring future antibiotic therapy.	The vast majority of patients with a history of penicillin allergy can safely use penicillins if an allergy evaluation, often including a penicillin skin test, is performed. [1,2] History alone is inadequate to rule out IgE mediated allergy to penicillin. [3] Penicillin skin testing in advance of need does not cause significant re-sensitization. [4-7] Patients who are shown not to be allergic to penicillin may be able to use more appropriate and potentially less toxic and/or expensive antibiotics. [8-10]	Diagnostic Indirect outcome (needed penicillin treatment)
Patients with a history of penicillin allergy where a penicillin class antibiotic is the drug of choice.	Skin tests may be negative in such patients, who can then safely receive penicillin.[5] Antibiotic desensitization in skin test positive patients renders them transiently tolerant and induces negative skin test, indicating blocking of mast cell/IgE activation events. [11-14]	Indirect outcome (needed penicillin treatment)
Patients with histories of multiple drug allergy/intolerance	Allergist/immunologists provide a comprehensive plan to evaluate the historical adverse drug reactions and provide suggestions on future therapies to minimize risks.[15-20]	Diagnostic Indirect outcome (treatment with needed medications)
Patients who may be allergic to protein based bio-therapeutics and require use of these materials	Allergist/immunologists perform skin testing using appropriate concentrations and techniques to determine current sensitivity.[15,19-23] For example, insulin desensitization allows for continued insulin therapy in patients with prior systemic reactions.[24,25]	Diagnostic Indirect outcome (treatment with needed biotherapeutics)
Patients with histories of adverse reactions to NSAID who require aspirin or other NSAID	Allergist/immunologists accurately diagnose ASA/NSAID sensitivity through challenge testing.[26] Allergist/immunologists perform ASA desensitization in patients with documented ASA sensitivity who require ASA for other medical conditions.[13,26,27] Desensitization in patients with ASA exacerbated respiratory disease may improve the control of both upper and lower respiratory disease in these patients.[13,26,28]	Diagnostic Indirect outcome (needed NSAID treatment) Indirect outcome (improved respiratory symptoms)

Referral Guideline	Rationale	Evidence Type
Patients who require chemotherapy medication for cancer or other severe conditions and have experienced a prior hypersensitivity reaction to those medications.	Desensitization allows for transient tolerance to chemotherapy medications when there is no alternative treatment.[27,29-31]	Indirect outcome (needed chemotherapy)
Patients with a history of possible allergic reactions to local anesthetics.	Allergist/immunologists are able to perform skin testing and graded challenge to find a safe local anesthetic for future use. Virtually all patients with histories of reactions to local anesthetics can subsequently tolerate the same or an alternate agent.[32-34]	Indirect outcome (needed local anesthetic treatment)
HIV-infected patients with a history of adverse reactions to trimethoprim-sulfamethoxazole (TM-S) who need this therapy.	Graded TM-S challenges can identify patients who are not currently sensitive to the drug and allow patients with reactions during challenge to subsequently tolerate the drug and safely continue therapy.[35-41]	Diagnostic Indirect outcome (needed TM-S therapy)
Patients with a history of reactions to induction agents or to non-penicillin antibiotics	Allergist/immunologists provide a comprehensive plan to evaluate the historical adverse drug reactions and provide suggestions on future therapies to minimize risks.[15-20] When no alternatives exist, allergist/immunologists can supervise rapid desensitization protocols.[27]	Diagnostic Indirect outcome (treatment with needed medications)

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