

LIST OF ICD-10-CM CODES ASSOCIATED WITH EACH WARNING SIGN

Pediatrics warning signs:

≥ 10 acute otitis media: H65 (and all subdiagnoses included in H65.0, H65.01, H65.02, H65.03 and H65.09); H66 (and all subdiagnoses); H67 (and all subdiagnoses); H73.0 (and all subdiagnoses); H73.1; H73.2; H92 (and all subdiagnoses).

≥ 3 sinusitis or orbital cellulitis: J01 (and all subdiagnoses); H05.01 (double scoring: one episode is enough, two episodes are not needed); J32 (double scoring: one episode is enough, two episodes are not needed).

≥ 3 pneumonias: J13; J14; J15 (and all subdiagnoses); J16; J17; J18 (and all subdiagnoses); J85.0 (one episode is enough); J85.1 (one episode is enough); J85.2 (one episode is enough); A37.01; A37.11; A37.81; A37.91.

Failure to thrive: R62.51; R62.52; R62.7; R63.4; R63.6; R64; P92.6.

Deep abscesses (in organs): A06.89; A17.81; A54.82; B43.1; D73.3; E32.1; G06 (and all subdiagnoses); G07; K63.0; K65.1; K68.1; K75.0; N15.1.

≥ 3 recurrent skin abscesses (internal note: 3 episodes separated by at least 30 days are required for scoring any of the codes except for L04, where only one episode is sufficient for scoring): K11.3; K12.2; K61; L02 (and all subdiagnoses; to score in this category, more than 2 episodes separated by 30 days are required); M65.0; M71.0; N34.0; N48.21; N70; N73; N76.4; H60.0; L04.

Mucocutaneous candidiasis (oropharynx, cutaneous, excluded vaginal) in patients ≥ 12 months of age: ≥ 2 episodes: B37.0; B37.2; B37.83; B37.84; B37.9.

≥ 2 systemic infections (including sepsis): J39.0; J39.1; H05.02; H05.03; H75.0; M72.8; M86 (and all subdiagnoses); M46.2 (and all subdiagnoses); M46.3 (and all subdiagnoses); M00 (and all subdiagnoses); M46.5 (and all subdiagnoses); M01 (and all subdiagnoses); M60.0 (and all subdiagnoses); M60.8 (and all subdiagnoses); M60.9; N49.3; G00 (and all subdiagnoses); G01 (and all subdiagnoses); G02 (and all subdiagnoses); G03 (and all subdiagnoses); G04 (and all subdiagnoses); G05 (and all subdiagnoses); G06 (and all subdiagnoses); G07 (and all subdiagnoses); J98.5 (and all subdiagnoses); J85.3; J86 (and all subdiagnoses); I40 (and all subdiagnoses); I41 (and all subdiagnoses); I30 (and all subdiagnoses); I32; I33; I38; A39 (and all subdiagnoses); A40 (and all subdiagnoses); A41 (and all subdiagnoses); O85; P36 (and all subdiagnoses, except: P36.0 and P36.4); R65.2 (and all subdiagnoses); R78.81; A07.2; B06.8 (and all subdiagnoses); B06.0 (and all subdiagnoses); B05.0; B05.1; B05.2; B05.3; B05.4; B05.8; B01.0; D61.81.

≥ 1 serious infection that alone indicate IEI study (Meningitis caused by HSV, etc.): A02.22; A02.21; A02.1; A02.25; A02.23; A02.24; A32 (and all subdiagnoses); A43; B59; J84.2; B37.5; B37.1; B37.6; B37.7; B37.81; B37.82; B37.89; B38.3; B38.4; B38.7; B45.1; B45.2; B45.3; B45.7; B45.8; B45.9; B00.3; B00.4; B00.7; B00.82; B02.0; B02.1; B02.7; A07.2; B39.3; A07.3; B25.0; B25.8 (includes: cytomegaloviral encephalitis); B58.2; B58.3; B58.81; A81.2; A31.2; A17 Tu (and all subdiagnoses); A18 (and all subdiagnoses); A19 (and all subdiagnoses); A48.0; C46 (and all subdiagnoses); D59.3; D76.1; D76.2; D76.3; Certain disorders affecting the immune system (including all diagnoses and subdiagnoses of D80-D84); D89.82; D89.9; K13.3; E31.0; D70.4; E70.33; T78.3.

Family history of inborn errors of immunity: Z83.2.

Consanguinity or other family history compatible with manifestations of inborn errors of immunity (lymphomas, etc.): Z84.3; Z80.7.

Cytopenia (not specified as autoimmune): D53.9; D59.4; D59.9; D69.6; D70.3; D70.8; D70.9; D70; D72.1; D72.81 (and all subdiagnoses); D73.0; D75.9; D60.0; D60.8; D60.9; D61.89; D61.9; D61.3; D61.818; D61.82.

Autoimmune cytopenia: D59.1; D59.0; D69.3; D69.4 (and all subdiagnoses).

Systemic autoimmune diseases, not including autoimmune cytopenia (celiac disease, arthritis, etc): D86 (and all subdiagnoses); D89.0; D89.2; E06.3; E10 (and all subdiagnoses); K90.0; M05 (and all subdiagnoses); M06 (and all subdiagnoses); M08 (and all subdiagnoses); M13.0; M13.1 (and all subdiagnoses); M13.8 (and all subdiagnoses); M30 (and all subdiagnoses); M31 (and all subdiagnoses, except: M31.6); M79.3; M54.0; L93 (and all subdiagnoses); M35.6; M46.0 (and all subdiagnoses); M46.1; M46.4 (and all subdiagnoses); M46.8 (and all subdiagnoses); M46.9 (and all subdiagnoses); M32 (and all subdiagnoses); M33 (and all subdiagnoses); M34 (and all subdiagnoses); M45 (and all subdiagnoses); L63 (and all subdiagnoses); L80; E27.1; L40 (and all subdiagnoses); L52; E70.30; E70.39; M35.0 (and all subdiagnoses); M35.1; M35.2; M35.3; M35.8; M35.9.

Endocrinopathology: Hypothyroidism, hyperparathyroidism, diabetes, etc. (Not described as autoimmune): E08 (including all diagnoses); E16.9; E20 (and all subdiagnoses); E21 (and all subdiagnoses); E22 (and all subdiagnoses, except: E22.2); E23.0; E23.2; E24.8; E24.9; P71.1; P71.4; E03 (and all subdiagnoses); E04 (and all subdiagnoses, except: E4.1); E05 (and all subdiagnoses); E06.1; E06.2; E06.5; E06.9; E07 (including all diagnoses); E27.40; E27.5; E27.9; E25.8; E25.9; E26.0; E26.9; E28 (and all subdiagnoses, except: E28.0, E28.1, E28.2, E28.31 and its subdiagnoses); E29 (and all subdiagnoses); E31.1; E34 (and all subdiagnoses, except: E34.2).

Hematological malignancy: C81-C96 (and all subdiagnoses of C81 to C96, except: C84.0 and all subdiagnoses, C88.0, C88.2, C90.0 and all subdiagnoses); D46 (and all subdiagnoses).

Solid organ neoplasia (only those that have been associated with inborn errors of immunity in pediatrics: thyroid): C73-C75 (and all subdiagnoses C73 to C75); C7A (and all subdiagnoses); E31.2 (and all subdiagnoses); D44 (and all subdiagnoses); D43 (and all subdiagnoses).

Oral (dental/palatal) anomalies: Q35 (and all subdiagnoses); Q36 (and all subdiagnoses); Q37 (and all subdiagnoses); M26.06; M26.02; M26.04; K00.0; K00.4; K00.6; K05.11; K12.0; K13.0; K13.21.

Chronic viral skin infection; or ≥ 20 acute episodes: B00.1; B00.0; B07 (and all subdiagnoses); B08 (and all subdiagnoses); B09.

Chronic eczema or other dermatological manifestations related to inborn errors of immunity: L20 (and all subdiagnoses); L50 (and all subdiagnoses); L83; L85.0; L98.2; L98.3.

Recurrent fever: A68.9; J03.91.

Inflammatory bowel disease in patients ≥ 2 years of age: K51 (and all subdiagnoses); K50 (and all subdiagnoses); K52.89.

Inflammatory bowel disease in patients < 2 years of age: K51 (and all subdiagnoses); K50 (and all subdiagnoses); K52.89.

Bronchiectasis without cystic fibrosis: J47 (and all subdiagnoses) exclude if presence of cystic fibrosis (E84 and subdiagnoses).

Live vaccine-derived infections: T88.0.

Exclusions from the algorithm if coded: B20 Human immunodeficiency virus [HIV] disease; Z21 Asymptomatic status of human immunodeficiency virus [HIV] infection.

Splenomegaly and other benign lymphoproliferation: R16.1; D47.7.

Corresponding diagnostic codes ICD10-CM (adults):

≥ 8 acute otitis media: H65 (and all subdiagnoses included in H65.0, H65.02, H65.03 and H65.09); H66 (and all subdiagnoses); H67 (and all subdiagnoses). H73.0 (and all subdiagnoses). H73.1; H73.2; H92 (and all subdiagnoses).

≥ 8 sinusitis or chronic sinusitis: J01 (and all subdiagnoses); H05.01 (double scoring: one episode is enough, two episodes are not needed); J32 (double scoring: one episode is enough, two episodes are not needed).

≥ 3 pneumonias: J13; J14; J15 (and all subdiagnoses); J16; J17; J18 (and all subdiagnoses); J85.0 (one episode is enough); J85.1 (one episode is enough); J85.2 (one episode is enough); A37.01; A37.11; A37.81; A37.91.

Deep abscesses (in organs and/or ganglia): A06.89; A17.81; A54.82; B43.1; D73.3; E32.1; G06 (and all subdiagnoses); G07; K63.0; K65.1; K68.1; K75.0; N15.1; L04.

Recurrent skin abscesses of repetition (3 or more): K11.3; K12.2; K61; L02 (and all subdiagnoses); M65.0; M71.0; N34.0; N41.2; N48.21; N70; N71; N73 (except N73.6); N76.4; H60.0.

Oropharyngeal or cutaneous candidiasis (excluding vaginal candidiasis): B37.0; B37.2; B37.83; B37.81.

Recurrent viral infections (colds, herpes, warts, condylomas, etc.) 25 or more episodes: B00.1; B00.0; B00.9; B01.9; B01.2; B01.8; B02.9; B02.3; B05 (and all subdiagnoses); B06.9; B07 (and all subdiagnoses); B08 (and all subdiagnoses); B09; B10.8 (and all subdiagnoses); B15 (and all subdiagnoses); B17.2; B25.1; B26.9; B27 (and all subdiagnoses); B30 (and all subdiagnoses); B33.8; B34 (and all subdiagnoses); A08 (and all subdiagnoses); A09; J00 (and all subdiagnoses); J02.9; J04 (and all subdiagnoses); J05 (and all subdiagnoses); J06

(and all subdiagnoses); J09 (and all subdiagnoses); J09 (and all subdiagnoses); J09 (and all subdiagnoses); J10 (and all subdiagnoses); J11 (and all subdiagnoses); J12 (and all subdiagnoses); J20 (and all subdiagnoses); J21 (and all subdiagnoses); J40.

2 or more systemic infections including sepsis: J39.0; J39.1; H05.02; H05.03; H75.0; M72.8; M86 (and all subdiagnoses); M46.2 (and all subdiagnoses); M46.3 (and all subdiagnoses); M00 (and all subdiagnoses); M46.5 (and all subdiagnoses); M01 (and all subdiagnoses); M60.0 (and all subdiagnoses); M60.8 (and all subdiagnoses); M60.9; N49.3; G00 (and all subdiagnoses); G01 (and all subdiagnoses); G02 (and all subdiagnoses); G03 (and all subdiagnoses); G04 (and all subdiagnoses); G05 (and all subdiagnoses); G06 (and all subdiagnoses); G07 (and all subdiagnoses); J98.5; J85.3; J86 (and all subdiagnoses); I40 (and all subdiagnoses); I41 (and all subdiagnoses); I30 (and all subdiagnoses); I32; I33; I38; A39 (and all subdiagnoses); A40 (and all subdiagnoses); A41 (and all subdiagnoses); O85; R65.2 (and all subdiagnoses); R78.81; A07.2; B06.8 (and all subdiagnoses); B06.0 (and all subdiagnoses); B05.0; B05.1; B05.2; B05.4; B05.8; B01.0; D61.81.

Unique severe condition that alone require study for inborn errors of immunity: A02.22; A02.21; A02.1; A02.25; A02.23; A02.24; A32 (and all subdiagnoses); A43; B59; J84.2; B37.5; B37.1; B37.6; B37.7; B37.82; B37.89; B38.3; B38.4; B38.7; B45.1; B45.2; B45.3; B45.7; B45.8; B45.9; B00.3; B00.4; B00.7; B00.82; B02.0; B02.1; B02.7; A07.2; B39.3; A07.3; B25.0; B25.8 (includes: cytomegaloviral encephalitis); B58.2; B58.3; B58.81; A81.2; A31.2; A17 (and all subdiagnoses); A18 (and all subdiagnoses); A19 (and all subdiagnoses); A48.0; C46 (and all subdiagnoses); D59.3; D76.1; D76.2; D76.3; (including all diagnoses and all subdiagnoses of D80-D84); D89.82; D89.9; K13.3; E31.0; D70.4; E70.33.

Atypical mycobacteria infection: A31.0; A31.1; A31.8; A31.9; A30.

Family history of inborn errors of immunity (hematological neoplasms, serious infections, etc.): Z83.2.

Consanguinity or other family history compatible with manifestations of inborn errors of immunity (hematological neoplasms): Z84.3; Z80.7

Presence of cytopenia (without specifying if autoimmune): D53.9; D59.4; D59.9; D69.6; D70.3; D70.8; D70.9; D70; D72.1; D72.81 (and all subdiagnoses); D73.0; D75.9; D60.0; D60.8; D60.9; D61.89; D61.9; D61.3; D61.818; D61.82.

Presence of bronchiectasis without cystic fibrosis: J47 (and all subdiagnoses) exclude if presence of cystic fibrosis (E84 and subdiagnoses).

Autoimmune cytopenia: D59.1; D59.0; D69.3; D69.4 (and all subdiagnoses).

Systemic and endocrine autoimmune diseases (celiac disease, arthritis, systemic lupus, thyroiditis, etc.): D86 (and all subdiagnoses); D89.0; D89.1; D89.2; E06.3; E10 (and all subdiagnoses); K90.0; M05 (and all subdiagnoses); M06 (and all subdiagnoses); M08 (and all subdiagnoses); M13.0; M13.1 (and all subdiagnoses); M13.8 (and all subdiagnoses); M30 (and all subdiagnoses); M31 (and all subdiagnoses); M79.3; M54.0; L93 (and all subdiagnoses); M35.6; M46.0 (and all subdiagnoses); M46.1; M46.4 (and all subdiagnoses); M46.8 (and all subdiagnoses); M46.9 (and all subdiagnoses); M32 (and all subdiagnoses); M33 (and all subdiagnoses); M34 (and all subdiagnoses); M35 (and all subdiagnoses); M45 (and all subdiagnoses); L63 (and all subdiagnoses); L80; E27.1; L40 (and all subdiagnoses); L52; E70.30; E70.39; M35.0 (and all subdiagnoses); M35.1; M35.2; M35.3; M35.8; M35.9; E20 (and all subdiagnoses); E21 (and all subdiagnoses); E21 (and all subdiagnoses); E03 (and all subdiagnoses); E04 (and all subdiagnoses); E05 (and all subdiagnoses); E06.1; E06.2; E06.5; E06.9; E07 (including all diagnoses); E31.1.

Splenomegaly and other benign lymphoproliferation: R16.1; D47.7.

Hematological neoplasia (excluding multiple myeloma, chronic myeloid leukemia, Waldenström's disease, etc.): C81 (and all subdiagnoses); C82 (and all subdiagnoses); C83 (and all subdiagnoses); C84 (and all subdiagnoses); C85 (and all subdiagnoses); C86 (and all subdiagnoses); C88.3; C88.4; C88.8; C88.9; C90.1 (including all diagnoses); C91.0 (including all diagnoses); C91.3 (including all diagnoses); C91.6 (including all diagnoses); C91.A (including all diagnoses); C91.9 (including all diagnoses); C92.0 (including all diagnoses); C92.3 (including all diagnoses); C92.4 (including all diagnoses); C92.5 (including all diagnoses); C92.6 (including all diagnoses); C92.A (including all diagnoses); C92.Z (including all diagnoses); C92.9 (including all diagnoses).

noses); C93.0 (including all diagnoses); C93.3 (including all diagnoses); C93.Z (including all diagnoses); C93.9 (including all diagnoses); C94.0 (including all diagnoses); C94.2 (including all diagnoses); C94.3 (including all diagnoses); C94.8 (including all diagnoses); C95.0 (including all diagnoses); C95.9 (including all diagnoses); C96 (including all diagnoses); D46 (and all subdiagnoses); D47.Z (and all subdiagnoses); D47.9 (and all subdiagnoses); D47.0 (and all subdiagnoses).

Solid organ neoplasia (only those related with inborn errors of immunity: skin, stomach, thyroid): C16 (and all subdiagnoses); C43-C44 (and all subdiagnoses from C43 to C44); C45 (and all subdiagnoses); C73-C75 (and all subdiagnoses C73 to C75); C7A (and all subdiagnoses); E31.2 (and all subdiagnoses); D44 (and all subdiagnoses); D00.2.

Inflammatory bowel disease: K51 (and all subdiagnoses); K50 (and all subdiagnoses).

Oral (dental/palatal) anomalies: Q35 (and all subdiagnoses); Q36 (and all subdiagnoses); Q37 (and all subdiagnoses); M26.06; M26.02; M26.04; K00.0; K00.4; K00.6; K05.3; K05.11; K12.0; K13.0; K13.21.

Chronic eczema or other dermatological manifestations related to inborn errors of immunity: L20 (and all subdiagnoses); L50 (and all subdiagnoses); L83; L85.0; L98.3.

Recurrent fever: A68.9; J03.91.

Exclusions from the algorithm if coded: B20 Human immunodeficiency virus [HIV] disease; Z21 Asymptomatic status of human immunodeficiency virus [HIV] infection.