

Pathophysiology Review: Pancytopenia — When Nothing Means Everything



by Cindy Kibbe, BS (CLS), CCS

Pancytopenia is a concerning condition commonly seen as the result of aggressive chemotherapy. Although it is a condition we coders have seen frequently, there are several similar conditions and diseases, which can make for a confusing documentation scenario. Recent guidance from Coding Clinic can also muddy the waters as much as clear them for our coding.

Let's dive in and examine this condition and how it can impact our coding.

What It Is — And What It's Not

Any coder worth their salt should remember a few of those prefixes and suffixes we studied so diligently. In this case, they really do answer what this condition is all about. Pancytopenia is just that — *pan*, meaning all; *cyto*, meaning cell; and *penia*, meaning poverty.

Pancytopenia is a condition where all formed elements of the blood — white blood cells, red blood cells, and platelets — are below normal levels.¹ This can become a serious, even life-threatening situation if not treated.

One of the more important concepts to remember about pancytopenia is that it is a condition, not a disease. Pancytopenia is the result of or manifestation of another disease process.

Pancytopenia can be confused with several diseases, when it is, in fact, a symptom of them:

- Aplastic Anemia
 - Bone marrow stops making all forms of blood cells
 - Can be acquired, inherited, and/or idiopathic
- Fanconi Anemia
 - Genetic disorder leading to bone marrow failure
 - Birth defects
 - Leukemias
- Cancer/Leukemia
 - Bone marrow displacement by primary or metastatic tumor^{1,2,3}

Common Culprits

Many diseases and physiological exposures can cause pancytopenia. Some of the more common ones include:

- Bone marrow cancers
- Chemotherapy
- Aplastic anemia
- Viral infections (Epstein-Barr, HIV, Sepsis, Hepatitis)
- Autoimmune diseases (SLE)
- Exposure to toxins (Radiation, Arsenic, Benzene)¹

By Another Name?

Pancytopenia can also be confused with other “ten-dollar” terms we often come across as we abstract our medical record documentation.

Leukopenia is a condition in which all WBC cell lines are suppressed. Neutropenia refers to a condition where just the neutrophils — your run-of-the-mill circulating WBCs — are suppressed. Agranulocytosis (also known as granulocytopenia) is a reduced number of granulocytes.

Pancytopenia differs from these three conditions because not only are white blood cells (WBCs) suppressed, so are red blood cells (RBCs) and platelets. Remember “pan” means “all.”

The Confusing Case of the Coding Clinic

Sometimes when we ask a question, the answer can be just as confusing. Such is our situation in trying to decide on the appropriate code for pancytopenia or similar conditions.

Take this question from Coding Clinic 4Q14, which asked:

“A patient with anemia and thrombocytopenia is admitted with fever and neutropenia. The provider documented that the neutropenia and anemia are secondary to chemotherapy for medulloblastoma with spinal metastasis. Since pancytopenia includes anemia, leukopenia, and thrombocytopenia, is it appropriate to assign a code for pancytopenia when the neutropenia is secondary to chemotherapy?”

The advice in this case was, “no,” you cannot assign the pancytopenia code. An Excludes1 Note at category D61 prohibits assigning pancytopenia, D61.8- with anything in D70.-, like the D70.1 (agranulocytosis secondary to chemotherapy) we want. Furthermore, Coding Clinic says, “Patients may present with both pancytopenia and neutropenia with fever. They are clinically different processes” and “the pancytopenia codes (D61.81-) alone do not convey the complete clinical picture (i.e. the neutrophils are suppressed vs. all WBCs).”

The good folks at Coding Clinic have asked the National Center for Health Statistics (NCHS) to do something about that pesky Excludes1 at D61. As of 2018, that Excludes1 remains.

Coding Clinic lined up the codes (except for the neoplasm) for this scenario like this:

- PRINCIPAL: D70.1, Agranulocytosis secondary to cancer chemotherapy
- R50.81, Fever with conditions classified elsewhere
- T45.1X5A, Adverse effect of antineoplastic and immunosuppressive drug, Initial encounter
- D64.81, Anemia due to antineoplastic chemotherapy
- D69.59, Other secondary thrombocytopenia4

As you can see, pancytopenia can add up as a whole lot of nothing that really is something for coders.



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Sources:

1. Healthline; <https://www.healthline.com/health/pancytopenia#overview1>
2. National Heart, Blood & Lung Institute; <https://www.nhlbi.nih.gov/health/health-topics/topics/fanconi>
3. American Cancer Society; <https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts.html>
4. Coding Clinic, Fourth Quarter, 2014

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