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What are the risk factors for the development of febrile neutropenia (FN) in patients receiving chemotherapy?

Hi, my name is Donald Harvey. I am director of Phase I Clinical Trial Section at the Winship Cancer Institute of Emory University in Atlanta. I am also an assistant professor in the Department of Hematology and Medical Oncology. Within my role as a director of the program as well as an oncology pharmacist, we frequently have to answer the question, "What risk factors are there for the development of neutropenic fever in any given patient?" Certainly, the type of cancer is an important risk factor that must be taken into account. Patients who are receiving chemotherapy, for example, as an inpatient, for example, acute myeloid leukemia tend to have greater risks of neutropenic fever than those receiving outpatient chemotherapy, age above 60 or 65 depending on the retrospective analysis that one is looking at, and certainly other risk factors like previous treatment, what cycle of chemotherapy patients may be on, as well as prior radiation. Patients who have had radiation to marrow containing areas are at higher risk of the development of neutropenic fever. Then there are other risk factors, for example open wounds or other sites of infection that may have greater impact on the development of neutropenic fever compared to someone who does not have an open wound or site of infection, as well as indwelling catheters. Certainly, we know that those are potential niduses for bacteria and may increase the risk of the development of neutropenic fever.