Patient Risk Assessment for Chemotherapy-Induced  
Febrile Neutropenia (FN) and G-CSF Use

For patients on myelosuppressive chemotherapy:

* Conduct patient risk assessment of FN first and every cycle
* It may be important to document 1 or more patient risk factors when treating with regimens with clinically significant FN risk

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Patient Name: | | | |  | | | | | | | | |  | | Date | | |  | | | |
| Regimen risk | | | | | | |  | |  | | | |  | | | |  | | |  | |
|  | Chemotherapy regimens associated with a clinically significant risk of FN1-3 | | | | | | | | | | | | | | | | | | | |
| *Chemotherapy regimens* | | | | |  | | | | | | | | | | | | | | | | |
| Treatment intent | | | | | | | | | | | | | | | | | | | | | |
| Curative/Adjuvant | | | | | | | | | | | Palliative Setting | | | | | | | | | | |
| Patient risk factors and most common ICD-10 codes (see back for code descriptions) | | | | | | | | | | | | | | | | | | | | | |
| *Please write the specific ICD-10 code on the rule next to the risk factor.* | | | | | | | | | | | | | | | | | | | | | |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Patient Status** | | | | | | | | | |  | Age ≥ 651,2 | | | | | | | | |  | Poor performance status1,2 | | | | | | | | |  | Poor nutritional status2,3 | | | | | | | | |  | *(E40–E46*\**, E50–E64*\*)4 | | | | |  | | | |  | Preexisting or persistent neutropenia1,2 | | | | | | | | |  | *(D61.81*\**, D70*\**)*4 | | |  | | | | | |  | Open wound1,2 | | | | | | | | |  | *(S01–S91*\**)*4 |  | | | | | | | |  | Active infection2 | | | | | | | | |  | *(A00–B99*\**, M01*\**, T86*\**, Z22*\**)*4 | | | | | | |  | |  | Bone marrow involvement with tumor1,2 | | | | | | | | |  | *(C79.5, C79.52)*4 | | | |  | | | | |  | Advanced disease2 | | | | | |  | | |  | Chronic immunosuppression in the post-transplant setting, including organ transplant1 | | | | | | | | |  | *(Z92.25, Z94*\*)4 | |  | | | | | | | | | | | | | | | |  | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Treatment History** | | | | | | | |  | Previous chemotherapy1,2 | | | | | | |  | Previous radiation therapy1,2 | | | | | | |  | *(Z92.3)4* |  | | | | | |  | Recent surgery1,2 | | | | | | |  | *(Z40\*, Z42\*)4* | | |  | | | | **Comorbidities** | | | | | | | |  | Poor renal function1,2 | | | | | | |  | *(N17*\**, N18*\**, N19*\**, N25*\**, N28*\**, R80.9, R94.4)*4 | | | | |  | |  | Liver dysfunction1,2 | | | | | | |  | *(K70–K77*\**, R94.5)*4 | | | |  | | |  | HIV infection1,2 | | | | | | |  | *(Z21, B20)*4 | |  | | | | |  | Cardiovascular disease2 | | | | | | |  | *(I10–I16*\**, I20–I25*\**, I26–I28*\**, I30–I52*\**, R94.3, Z95*\**)*4 | | | | | | |  |  | | | | | | | | | | | | | | | |
| Prescribe G-CSF? | | | | | | | | | |  | |  | | | | | | | | | |
| |  |  | | --- | --- | |  | Yes | | | | | | | | | | |  | | |  |  |  | | --- | --- | --- | |  | No |  | | | | | | | | | | |
| If yes: | | | | | | | | | |  | | | | | | | | | | |
|  | Primary prophylaxis use | | | | | Secondary prophylaxis use | | | | | | | | | | | | | | |
|  |  | | | | | *Note whether changes to treatment plan cannot be considered and patient is still at risk of FN* | | | | | | | | | | | | | | |
| Healthcare Professional Signature | | | | | | | |  |  | | | | |  | | Date | | |  | | |

|  |  |
| --- | --- |
| **Add this risk assessment to your patient’s chart to help with prior authorizations for G-CSF use**  \* Subcodes exist for these risk factors.  Adapted with permission from the *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Myeloid Growth Factors V.2.2017*. © 2017 National Comprehensive Cancer Network, Inc. All rights reserved. The *NCCN Guidelines*® and illustrations herein may not be reproduced in any form for any purpose without the express written permission of the NCCN. To view the most recent and complete version of the *NCCN Guidelines*®, go online to NCCN.org. The *NCCN Guidelines*® are a work in progress that may be refined as often as new significant data becomes available. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way. | |
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ICD-10 Codes for Febrile Neutropenia (FN) Risk Factors

For patients on myelosuppressive chemotherapy:

* Conduct patient risk assessment of FN first and every cycle
* It may be important to document 1 or more patient risk factors when treating with regimens with clinically significant FN risk

Patient Status

Age ≥ 65

**(No codes)**

Poor performance status

**(No codes)**

Poor nutritional status

* E40–E46:\* Malnutrition4
* E50–E64:\* Other nutritional deficiencies4

Preexisting or persistent neutropenia

* D61.81:\* Pancytopenia4
* D70:\* Neutropenia4
* **D70.1:** Agranulocytosis   
  secondary to cancer chemotherapy
* **D70.2:** Other drug-induced agranulocytosis
* **D70.3:** Neutropenia due to infection
* **D70.4:** Cyclic neutropenia
* **D70.9:** Neutropenia, unspecified

Open wound

***NOTE:*** There are > 300 codes for this risk factor. Coding depends on the location of the open wound. The range below includes some of the many potential coding options.

* S01–S91:\* Injury and certain other consequences of external causes4

Active infection

***NOTE:*** There are > 300 codes for this risk factor. Coding depends on the source and type of infection. The range below includes some of the many potential coding options.

* A00–B99:\* Certain infectious and parasitic diseases4
* M01:\* Direct infections of joint in infectious and parasitic diseases classified elsewhere4
* T86:\* Complications of transplanted organs and tissues4
* Z22:\* Carrier of infectious disease4

Bone marrow involvement with tumor

* C79.5: Secondary malignant neoplasm of bone and bone marrow4
* C79.52: Secondary malignant neoplasm of bone marrow4

Advanced disease

***NOTE:*** There are > 300 codes for this   
risk factor. Coding depends on clinician definition.

Chronic immunosuppression in the   
post-transplant setting, including   
organ transplant

* Z92.25: Personal history of immunosuppression therapy4
* Z94:\* Transplanted organ and   
  tissue status4

Treatment History

Previous chemotherapy

**(No codes)**

Previous radiation therapy

* Z92.3: Personal history of irradiation4

Recent surgery

* Z40:\* Encounter for prophylactic surgery4
* Z42:\* Encounter for plastic surgery and reconstructive surgery following medical procedure or healed injury4
* **Z42.1:** Encounter for breast reconstruction following mastectomy
* Z42.8: Encounter for other plastic surgery and reconstructive surgery following medical procedure or healed injury

Comorbidities

Poor renal function

* N17:\* Acute kidney failure4
* **N17.9:** Acute kidney failure, unspecified
* N18:\* Chronic kidney disease4
* **N18.6:** End stage renal disease
* **N18.9:** Chronic kidney disease, unspecified
* N19:\* Unspecified kidney failure4
* N25:\* Disorders resulting from poor renal tubular function4
* N28:\* Other disorders of kidney and ureter, not classified elsewhere4
* R80.9: Proteinuria, unspecified4
* R94.4: Abnormal results of kidney   
  function studies4

Liver dysfunction

* K70–K77:\* Diseases of liver4
* **K70.9:** Alcoholic liver disease, unspecified
* **K71.9:** Toxic liver disease, unspecified
* **K72.9:** Hepatic failure, unspecified
* **K73.9:** Chronic hepatitis, unspecified
* **K74:** Fibrosis & cirrhosis of liver
* **K75.9:** Inflammatory liver disease, unspecified
* **K76.9:** Liver disease, unspecified
* R94.5: Abnormal results of liver   
  function studies4

HIV infection

* Z21: Asymptomatic human immunodeficiency virus [HIV]   
  infection status4
* B20: Human immunodeficiency virus   
  [HIV] disease4

Cardiovascular disease

* I10–I16:\* Hypertensive diseases4
* I20–I25:\* Ischemic heart diseases4
* I26–I28:\* Pulmonary heart disease & diseases of pulmonary circulation4
* I30–I52:\* Other forms of heart disease4
* R94.3: Abnormal result of cardiovascular function studies4
* Z95: Presence of cardiac & vascular implants and grafts4

\* Subcodes exist for these risk factors.