University of Vermont Health

UVM Health HEMATOLOGY ISOLATED NEUTROPENIA Referrals/Consult

Definition of neutropenia:

- Absolute neutrophil count 1.0-1.5: mild neutropenia – no increased risk of infection
- Absolute neutrophil count 0.5- <1.0: moderate neutropenia – mild to moderate risk of infection
- Absolute neutrophil count <0.5: severe neutropenia – high risk of infection

Background:

- Neutropenia can be acquired in situations such as infection, inflammation, medication side effect, autoimmune disorders, idiopathic, splenomegaly, liver disease, hematologic malignancies, or inherited/congenital
- This referral order is for neutropenia. If a patient has a low white blood cell count (leukopenia), with a normal absolute neutrophil count (ANC), this referral should NOT be used. The patient's DIFFERENTIAL of the CBC is needed to determine which cell line is reduced and the appropriate referral.
- Some people who are African-American or African-origin have a common variant in the Duffy antigen which causes lower neutrophil counts (Duffy Null Associated Neutrophil Count). This is not associated with any disease and is available by a readily available blood test. *People who have the Duffy null phenotype can have other causes of neutropenia.*

Purpose:

- To identify patients who may have a hematologic disease causing neutropenia and to expedite the referral process.
- To allow a management plan to be put in place at a patient's first Hematology visit.

Evaluation:

- Please include in your referral the list of medications and over-the-counter medications, vitamins, and herbal remedies

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Laboratory studies (within the prior 3 months):

- Complete Blood Count with differential - showing persistent neutropenia over at least two or more blood draws
- Peripheral blood smear with pathologist review if ANC < 1 k/cmm (1000 k/mcL)
- Comprehensive metabolic profile
- Folate, B12, Ferritin, HIV, HCV
- Serum copper and ceruloplasmin level in patients with a history of bariatric surgery, malnutrition, liver disease, or use of Zinc supplementation

If patient is African or African-origin:

- Verify whether the patient has the Duffy null red blood cell phenotype. This can be done by either calling the lab that performs type and screen (blood bank testing) and requesting serological phenotyping of the patient's Duffy antigens, OR you can send molecular phenotyping to the American Red Cross.

Instructions to send molecular phenotyping for UVMHN providers:

1. Prior auth may be required since this is genetic testing. The test is "Human Erythrocyte Antigen (HEA) Genotyping Panel"; **Test Code SREF-IVD; Recommended CPT Code 0001U, as of Feb. 1, 2017**
2. Alert the blood bank that you will be sending the following order: Miscellaneous test, non mayo. Test name: HEA Molecular Panel (Molecular Testing for Human Erythrocyte Antigen). Reference lab: American Red Cross. Web link to reference lab: https://www.redcrossblood.org/biomedical-services/blood-diagnostic-testing/molecular-testing.html. Comments: Please draw 5-10 ml EDTA. Please contact the blood bank if there are questions about the specimen requirements (802-847-3569)

Please call Hematology to expedite a referral if:

- **studies reveal presence of blasts on peripheral smear; be sure to place a referral, with urgent status**
- **absolute neutrophil count <0.5 or severe neutropenia with concurrent anemia and/or thrombocytopenia.**