

**PROVINCIAL LABORATORY SERVICES
COMMUNIQUÉ**

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TO: PEI Physicians and Nurse Practitioners

FROM: Dr. Jennifer Fesser, Division Head (PEI Laboratory Hematology)

DATE: May 24, 2023

RE: ANC Critical Value

Effective immediately, an ANC (absolute neutrophil count) of less than 500 per mm³ will be reported as a critical value, if the patient was not previously neutropenic or previous counts are not known.

ANC (per mm ³)	SI UNITS (x 10 ⁹ /L)	SEVERITY OF NEUTROPENIA
>1000	>1.0	MILD
<1000 but >500	<1.0 but >0.5	MODERATE
500 or less	0.5 or less	SEVERE
<100	<0.1	AGRANULOCYTOSIS

The risk of infection (and in particular of bacterial infection) increases significantly when the ANC drops below 1000 per mm³. Most laboratories set the critical value for the ANC at 500 per mm³. This is largely based on work done by Rivera et al (1) who demonstrated that in patients with chemotherapy-induced neutropenia, an ANC less than 500 per mm³ was strongly associated with febrile neutropenia, with a relative odds ratio of 4.8.

- 1) Rivera E et al. First-cycle absolute neutrophil count can be used to improve chemotherapy-dose delivery and reduce the risk of febrile neutropenia in patients receiving adjuvant therapy: a validation study. Breast Cancer Res. 2003;5(5):R114-R120.

FOR MORE INFORMATION PLEASE CONTACT:

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