

NEUTROPENIA

Delayed-onset neutropenia can occur between **1 and 5 months** after rituximab. (1)(2)

Empiric treatment of neutropenic fever

- → An antipseudomonal beta-lactam, such as cefepime, ceftazidime, piperacillin-tazobactam, meropenem, or imipenem.⁽³⁾
- → Treatment against methicillin-resistant Staphylococcus aureus (MRSA) with agents such as vancomycin should be included in empiric antimicrobial regimens when other additional clinical indicators are present, such as pneumonia, skin or soft tissue infection, or suspected catheter-related infection, or if the patient is hemodynamically unstable.⁽³⁾
- → GCSFs (Filgrastim) can also be used in patients with neutropenic fever with additional risk factors for severe complications, such as those with an ANC of less than 100 cells/mm3 and/or with pneumonia, hypotension, multiorgan failure, or invasive fungal infections. (3)(4)(5)
- → Recovery with the use of a filgrastim product can occur within four days. (5)(6)

To keep a patient's ANC greater than 1,000 cells/mm3, maintenance strategies using Filgrastim once or twice weekly may be employed for several months for patients with prolonged neutropenia despite initial neutrophil recovery. (7)(8)

⁽¹⁾ National Cancer Institute. NCI common terminology criteria for adverse events, v4.0 (CTCAE) May 28, 2009. [Accessed May 29, 2016]

⁽²⁾ Dunleavy K, Tay K, Wilson WH. Rituximab-associated neutropenia. Semin Hematol. 2010;47(2):180–186.

⁽³⁾ Friefield AG, Bow EJ, Sepkowitz KA, et al. Clinical practice guideline for the use of antimicrobial agents in neutropenic patients with cancer. Clin Infect Dis. 2011;52:e56–e93.

⁽⁴⁾ Motl SE, Baskin RC. Delayed-onset grade 4 neutropenia associated with rituximab therapy in a patient with lymphoma: case report and literature review. Pharmacotherapy. 2005;25(8):1151–1155.

⁽⁵⁾ Chaiwatanatorn K, Lee N, Grigg A, Filshie R, Firkin F. Delayed-onset neutropenia associated with rituximab therapy. Br J Haematol 2003;121:913–8.

⁽⁶⁾ Voog E, Morschhauser F, Solal-Ce'ligny P. Neutropenia in patients treated with rituximab. N Engl J Med 2003;348:2691-4

⁽⁷⁾ Cairoli R, Grillo G, Tedeschini A, Avanzo G, Marenco P, Morra E. High incidence of neutropenia in patients treated with rituximab after autologous stem cell transplantation. Haematologica 2004;89:361–3.

⁽⁸⁾ Belhadj K, Doghmi K, El Gnaoui T, et al. Delayed severe neutropenia after rituximab therapy in 12 out of 282 patients with non-Hodgkin's lymphoma treated in a single institution: a rare adverse event of unknown mechanism. Abstract 029 presented at the 9th Meeting of the European Haematology Association, Geneva, Switzerland, June 2004.