UNDERSTANDING **VENO-OCCLUSIVE DISEASE (VOD)**

Hepatic veno-occlusive disease (VOD), also known as sinusoidal obstruction syndrome (SOS), is a potentially devastating complication that can occur following hematopoietic stem-cell transplant (HSCT).1 In up to half of all cases, VOD progresses to VOD with multi-organ dysfunction (VOD with MOD), which has been shown to be deadly in 84% of patients. 1,2







over patients at risk for VOD

INCIDENCE & RISKS³⁻⁷





Patient-related

- Age
- · Preexisting hepatic disturbance or dysfunction - Liver fibrosis
- Previous liver disease
- Elevated pre-HSCT AST/ALT
- · Hepatotoxic medication



Transplant-related

- · Allogeneic transplant
- HLA mismatch
- · Previous myeloablative HSCT
- · High-intensity conditioning regimens
- Oral busulfan - Busulfan, in combination
- with cyclophosphamide
- · Total body irradiation (high or single dose)



Observation

for signs and symptoms of VOD progression

SIGNS & SYMPTOMS^{8,9}



Right upper quadrant pain/hepatomegaly



Weight gain



Elevated bilirubin





First 21 days signs and symptoms emerge

Monitor starting at Day 0 following HSCT for signs and symptoms of VOD, such as:24,

- · Weight gain
- · Fluid retention
- · Edema and ascites
- · Hepatomegaly
- · Jaundice
- · Abdominal discomfort

Detection/Diagnosis

of VOD progression as soon as possible

IMPACT







- 1. Coppel JA, (Richardson PG, Soiffer R, et al. Hepatic veno-occlusive disease following stem cell transplantation: incidence, clinical course, and outcome. Biol Blood Marrow Transplant. 2010;16(2):157-168.

 2. Carrens E, Diaz-Beyà M, Rosini L, et al. The incidence of veno-occlusive disease following allogeneic hematopoietic stem cell transplantation has diminished and the outcome improved over the last decade. Biol Blood Marrow Transplant. 2011;17(1):173-172.
- 3. Tsingois PD, Resnick B, Ami B, et al. Incidence and risk factors for moderate-to-severe veno-occlusive disease of the liver after allogeneic stem cell transplantation using a reduced intensity conditioning regimen. Bone Marrow Transplant. 2014;49(11):1389-1392.
- A Chareas E. Early complications after HSCT. In: Apperley J, Carreras E, Gluckman E, et al, eds. The EBMT Handbook: 6th ed. Paris, France: European School of Haematology; 2012:176-195 5. Carreras E. Bertz H, Arcess W, et al; European Group for Blood and Marrow Transplantation Chronic Leukemia Working Party. Incidence and outcome of hepatic veno-occlusive disease after study of the European Group for Blood and Marrow Transplantation. Blood: 1999;3(10):3999-3604. 6. Dulley FL, Kanfer EJ, Appelbaum FR, et al. Venocolusive disease of the liver after chemoradiotherapy and autologous bone marrow transplantation. 7ransplantation. 1987;43(6):870-873.
 7. Dignan FL, Wynn RF, Hadzic N, et al. BCSHBSBMT guideline: diagnosis and management of veno-occlusive disease (sinusoidal obstruction syndrome) following haematopoietic stem cell transplantation. Br J Haematol. 2013;163(4):444-457.
- Clarrers E. How I manage sinuscidal obstruction syndrome after heamtappenier or white Collective countries. Commodate American Service of the Conference of the C -a position statement from the European Society for Blood and Marrow Transplantation (EBMT). Bone Marrow