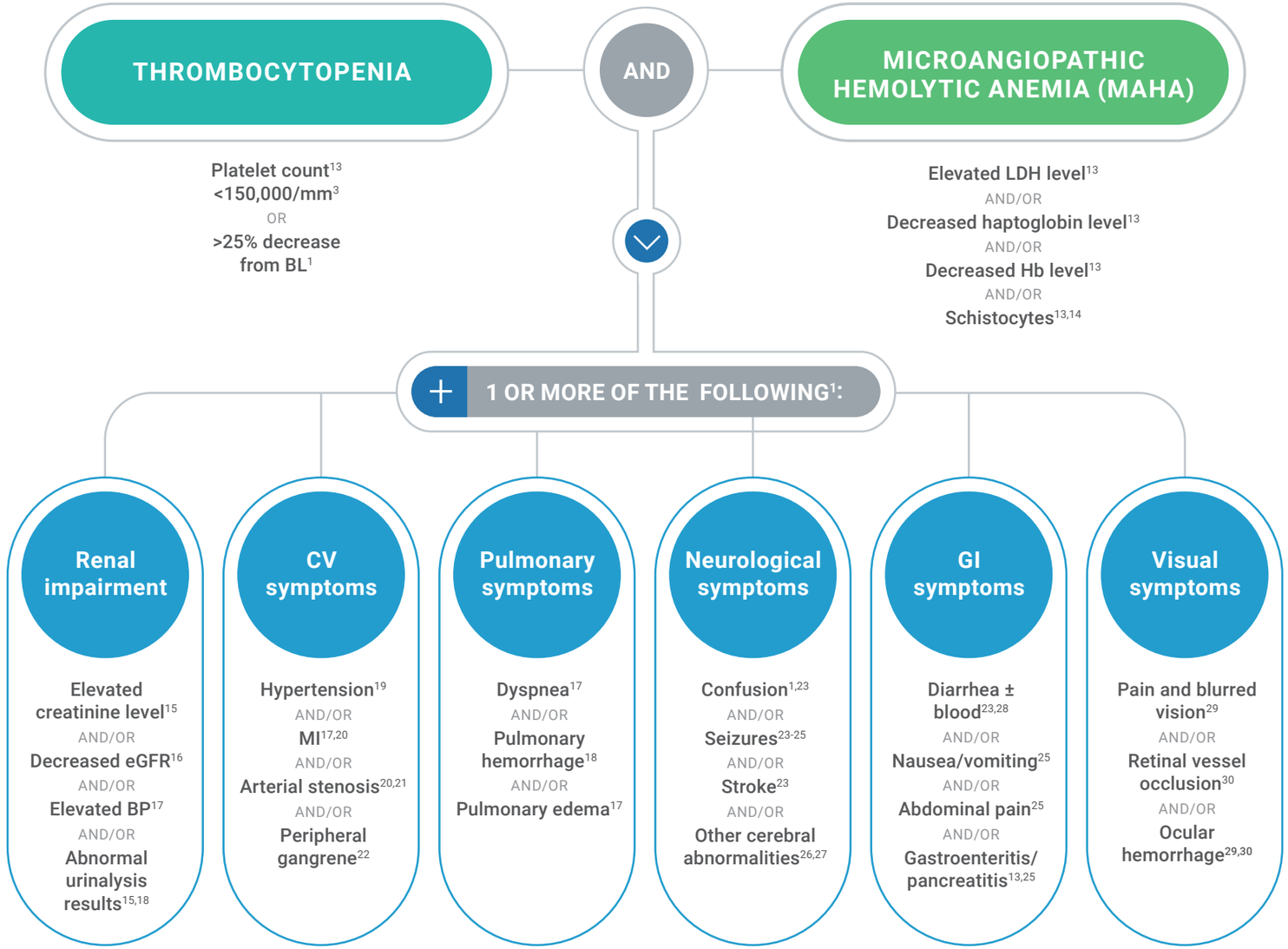
THE HSCT-TMA CLINICAL TRIAD

Clinical signs of HSCT-TMA include thrombocytopenia and microangiopathic hemolysis plus organ damage[1]

HSCT-TMA is a frequent and potentially lethal complication in patients who have undergone allogeneic HSCT.[2-6] Currently, no consensus criteria for the diagnosis of HSCT-TMA exist,[7] and identification can be challenging.[8-12]

HSCT-TMA, hematopoietic stem cell transplant–associated thrombotic microangiopathy.

Be aware of signs that may indicate your post-transplant patients are experiencing HSCT-TMA



THE 3-HIT HYPOTHESIS OF HSCT-TMA

Potential risk factors for development of HSCT-TMA

HSCT-induced endothelial injury is caused by a 3-hit process. The process begins with underlying predispositions to complement activation or preexisting endothelial injury and is exacerbated by conditions associated with transplant and post-transplant events.[31]

1 FIRST HIT
UNDERLYING PREDISPOSITIONS[31-33]

- African American ethnicity
- Female sex
- High baseline LDH levels
- Genetic variants

2 SECOND HIT
ENDOTHELIAL INJURY[10]

- Conditioning regimen
- Unrelated donor transplants
- HLA mismatch
- Prolonged immobilization

3 THIRD HIT
COMPLEMENT DYSREGULATION[10,31]

- aGVHD
- Infection

aGVHD, acute graft-vs-host disease; **BL**, baseline; **BP**, blood pressure; **CV**, cardiovascular; **eGFR**, estimated glomerular filtration rate; **GI**, gastrointestinal; **Hb**, hemoglobin; **HLA**, human leukocyte antigen; **HSCT-TMA**, hematopoietic stem cell transplant–associated thrombotic microangiopathy; **LDH**, lactate dehydrogenase; **MI**, myocardial infarction

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