CLINICAL GUIDELINES

blood advances

Management of cancer-associated anemia with erythropoiesis-stimulating agents: ASCO/ASH clinical practice guideline update

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Purpose: To update the American Society of Clinical Oncology (ASCO)/American Society of Hematology (ASH) recommendations for use of erythropoiesis-stimulating agents (ESAs) in patients with cancer.

Methods: PubMed and the Cochrane Library were searched for randomized controlled trials (RCTs) and meta-analyses of RCTs in patients with cancer published from January 31, 2010, through May 14, 2018. For biosimilar ESAs, the literature search was expanded to include meta-analyses and RCTs in patients with cancer or chronic kidney disease and cohort studies in patients with cancer due to limited RCT evidence in the cancer setting. ASCO and ASH convened an Expert Panel to review the evidence and revise previous recommendations as needed.

Results: The primary literature review included 15 meta-analyses of RCTs and two RCTs. A growing body of evidence suggests that adding iron to treatment with an ESA may improve hematopoietic response and reduce the likelihood of RBC transfusion. The biosimilar literature review suggested that biosimilars of epoetin alfa have similar efficacy and safety to reference products, although evidence in cancer remains limited.

Recommendations: ESAs (including biosimilars) may be offered to patients with chemotherapy-associated anemia whose cancer treatment is not curative in intent and whose hemoglobin has declined to $<$ 10 g/dL. RBC transfusion is also an option. With the exception of selected patients with myelodysplastic syndromes, ESAs should not be offered to most patients with nonchemotherapy-associated anemia. During ESA treatment, hemoglobin may be increased to the lowest concentration needed to avoid transfusions. Iron replacement may be used to improve hemoglobin response and reduce RBC transfusions for patients receiving ESA with or without iron deficiency. Additional information is available at www.asco.org/supportive-care-guidelines and www.hematology.org/guidelines.

Introduction

Use of erythropoiesis-stimulating agents (ESAs) to manage anemia raises hemoglobin (HgB) levels and reduces the need for RBC transfusions, but increases the risk of thromboembolic events.[1,2] Studies have also reported decreased survival, increased mortality during active study phase, and/or an increased risk of cancer progression or recurrence with the use of ESAs in patients with cancer.[3-6] The risks of ESAs prompted multiple regulatory actions by the US Food and Drug Administration (FDA) between 2004 and 2009, and in 2010, the FDA approved a Risk Evaluation

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