

**Appendix 1 Investigation of the Chinese physician perception on the treatment of chemotherapy-induced anemia**

- ❖ Hospital:
- ❖ Hospital grade:
  
- ❖ Department:
- ❖ Working time (years):
  - Less than 5 years
  - 5-10 years
  - 11-15 year
  - 16-20 years
  - More than 20 years
  
- ❖ Professional title:
  - Attending physician
  - Associate
  - Chief physician
  - Other

The number of patients for whom you have prescribed chemotherapy in the past 3 months (if the same patient has received 2 doses of chemotherapy in 3 months, count as 2) was: (Number of patients). Among them, the number of patients with chemotherapy dose reduction or chemotherapy delay due to anemia was:

1. Before each cycle of chemotherapy, under the condition that the treatment regimen for correcting anemia is not subject to any objective restrictions, what range do you think the hemoglobin (Hb) value should be so that the patient can complete the predetermined dose regimen of chemotherapy on time? (single choice)
  - a) Hb  $\geq$ 120 g/L
  - b) Hb  $\geq$ 100 g/L
  - c) Hb  $\geq$ 80 g/L
  - d) Hb  $\geq$ 60 g/L
  
2. In clinical practice, among patients undergoing chemotherapy with the following characteristics, which factors do you think warrant special attention for anemia management? (multiple choice)
  - a) Anemia caused by symptoms of tumor disease itself (such as blood loss, hemolysis, bone marrow invasion, etc.)
  - b) Primary or secondary renal insufficiency
  - c) Use of chemotherapy regimens or nephrotoxic agents with intermediate-to-high-risk myelosuppression
  - d) Prior chemotherapy-related anemia
  - e) Hb within normal range decreasing by  $\geq$ 20 g/L after chemotherapy
  - f) Other (please fill in):
  
3. In your clinical practice, in patients with chemotherapy-related anemia with anemia symptoms, at which of the following Hb levels, will you administer corrective anemia treatment? (single choice)
  - a) Hb <120 g/L
  - b) Hb  $\leq$ 100 g/L
  - c) Hb  $\leq$ 80 g/L
  - d) Hb  $\leq$ 60 g/L

4. In your clinical practice, in patients with chemotherapy-related anemia without anemia symptoms, at which of the following Hb levels will you administer corrective anemia treatment? (Single choice)

- a) Hb <120 g/L
- b) Hb  $\leq$ 100 g/L
- c) Hb  $\leq$ 80 g/L
- d) Hb  $\leq$ 60 g/L

5. In clinical practice, for the above-mentioned patients with chemotherapy-related anemia requiring correction of anemia, have you used ESAs (erythropoiesis-stimulating agents) for treatment in your department? (single choice)

- a) Yes
- b) No

6. What are the reasons why you have not used ESAs (erythropoiesis-stimulating agents) to correct chemotherapy-related anemia (please score out of 10 according to the level of agreement, with 1 being “completely disagree” and 10 being “completely agree”):

- a) ESAs not available in my department
- b) Requirement to go to another medical institution for subcutaneous/injection administration and patient resistance
- c) Patient refusal due to injection site pain
- d) Slow onset of action compared with blood transfusion and failure to meet the requirements of the chemotherapy schedule
- e) Increased thrombotic risk in patients with cancer
- f) Potential increase in the risk of tumor progression and metastasis and/or reduced patient survival time

7. In clinical practice, for patients who develop chemotherapy-related anemia requiring continued chemotherapy, at which of the following levels will you use ESAs (erythropoiesis-stimulating agents) to correct their anemia?

- a) Hb <120 g/L
- b) Hb  $\leq$ 100 g/L
- c) Hb  $\leq$ 80 g/L
- d) Hb  $\leq$ 60 g/L

8. In your opinion, the advantages of using ESAs (erythropoiesis-stimulating agents) in patients with chemotherapy-related anemia are: (please select the 3 most important) (multiple choice)

- a) Effective increase and maintenance of Hb levels
- b) Reduction of transfusion requirements or complete avoidance of transfusion
- c) Improved patient quality of life and anemia-related symptoms
- d) Increased patient sensitivity to chemoradiotherapy
- e) Good patient compliance (prescribed for no less than 8 weeks)
- f) Acceptable cost

9. What do you think the shortcomings of ESAs (erythropoiesis-stimulating agents) are in clinical application? (please score out of 10 according to the level of agreement, with 1 being “completely disagree” and 10 being “completely agree”)

- a) Increased thrombotic risk
- b) Potential increase in the risk of tumor progression and metastasis and/or reduction of patient survival time
- c) Slow onset of action compared with blood transfusion and the failure to meet the requirements of scheduled chemotherapy
- d) Lack of patient response to chemotherapy
- e) Subcutaneous/IV administration requiring staff administration and increased visitation
- f) Subcutaneous injection site pain and poor patient compliance (less than 8 weeks as prescribed)

10. In your opinion, the advantages of i.v.iron in patients with chemotherapy-related anemia are: (please select the 3 most important)

- a) Prompt correction of iron deficiency
- b) Improved response to ESA (erythropoiesis-stimulating agent) therapy
- c) Improved hematopoietic response and reduced blood transfusion
- d) No gastrointestinal irritation

11. What do you think are the shortcomings of intravenous iron supplementation in clinical practice? (please score out of 10 according to the level of agreement, with 1 being “completely disagree” and 10 being “completely disagree”):

- a) IV requirement of outpatient or inpatient medication, with poor patient compliance
- b) Injection site pain
- c) Numerous adverse reactions, such as low blood pressure, nausea, vomiting, diarrhea, pain, hypertension, difficulty breathing, itching, headache, and vertigo
- d) No established long-term safety
- e) Increase economic burden

12. What do you think are the challenges of blood transfusion in clinical practice? (please score out of 10 according to the level of agreement, with 1 being “completely disagree” and 10 being “completely disagree”)

- a) Hb requires patients with <60–70 g/L as an indication for transfusion therapy
- b) Local blood sources are in short supply, and eligible patients do not necessarily have timely access to transfusion therapy
- c) There are multiple risks (infection, allergy, immunosuppression, congestive heart failure, etc.)
- d) There is increased thrombotic risk
- e) There is increased risk of i.v.iron overload

Hospitalization is required for RBC transfusions