



Title Erythropoietin in Tumor Anemia
Agency ITA, HTA Unit of the Institute of Technology Assessment
ITA of the Austrian Academy of Science, Strohgasse 45/3. Stock, A-1030 Vienna, Austria;
Tel: +43 1 5158 16582 Fax: +43 1 710 98 83; <http://www.oeaw.ac.at/ita/hta>
Reference ITA-Reports June 1/2000

The excellent results achieved with the use of Epoetin (recombinant human erythropoietin, EPO) in the chronic anemia of renal insufficiency raised the expectation that it might also be suited to treat chronic anemia in cancer. While EPO is most effective in treating anemia of (some) hematological malignancies, the results in anemia of solid tumors are less conclusive: 40% to 50% of tumor patients do not respond to EPO. The treatment of anemia with EPO is an expensive intervention.

The report is based on a systematic review of the clinical literature and clinical guidelines. The assessment was discussed with experts (hemato-oncologists) in an expert hearing and approved by them before publication.

- Assessment of the available clinical information focuses on overall efficacy and effectiveness of EPO in tumor anemia: response rates and response criteria, doses-regimes, response of different types of tumors to EPO, and models for early recognition of responders and nonresponders.
- The economic assessment focuses on quality of life (QoL), therapy options, and transfusion-reduction.

The project aims to provide relevant information to health insurers on the appropriate treatment with EPO in tumor anemia.

Results

- Patients achieving an Hb-increase >2 g/dl are considered as responders. Only 50% to 60% of tumor patients respond to EPO.
- Of the responders, 20% to 30% still require transfusions.
- The effect of EPO treatment is measured by increased QoL and prevention/reduction of transfusion needs. There is little evidence on QoL for the responders who still need transfusion.

There is insufficient evidence to show an association between response rates and types of tumors.

Conclusion

- Early recognition of responders and nonresponders is the key to appropriate and cost-effective treatment with EPO. Different prediction parameters, combined with transfusion requirements and life expectancy/stability of tumor status, predict the chances of patients benefiting from EPO treatment.

The assessment is available in German only. Full report available at: www.oeaw.ac.at/ita/hta/