

**2009 Annual Meeting of the
American Society of Hematology**

Highlights Report

**Matched-Pair Analysis of 186 MDS Patients
Receiving Iron Chelation Therapy or Transfusion
Therapy Only**

***Frank Fox, Andrea Kündgen, Kathrin Nachtkamp,
Corinna Strupp, Rainer Haas, Ulrich Germing,
Norbert Gattermann***

Abstract 1747

*2009 Annual Meeting of the American Society of Hematology
Highlights Report*

Matched-Pair Analysis of 186 MDS Patients Receiving Iron Chelation Therapy or Transfusion Therapy Only (Abstract # 1747)

Frank Fox, Andrea Kündgen, Kathrin Nachtkamp, Corinna Strupp, Rainer Haas, Ulrich Germing, Norbert Gattermann

In recent years, a number of studies have demonstrated significant associations between transfusion dependency, iron overload and shortened survival – primarily as a result of liver and cardiac dysfunction – in patients with lower-risk MDS.¹⁻³

Iron overload has also been reported to accelerate acute myeloid leukemia (AML) progression and treatment guidelines agree that patients with low-risk MDS receiving transfusions are the most likely to benefit from iron chelation therapy.⁴⁻⁷

In the current absence of prospective, randomized phase III trial data, this retrospective matched pairs analysis of 186 MDS patients offers additional evidence of the significant improvement in overall survival achieved through chelation therapy.

A total of 94 patients with mostly Low or Int-1 risk MDS undergoing long-term chelation were matched with similar patients who had received supportive care only according to age, gender, MDS type according to WHO classification and IPSS score. All patients had iron overload (serum ferritin >500ng/mL) and were followed up until death or June 30 2009. The two groups were compared in terms of overall survival, median survival time and risk of AML evolution (Figure 1, Figure 2).

**2009 Annual Meeting of the American Society of Hematology
Highlights Report**

Figure 1. Survival and AML evolution

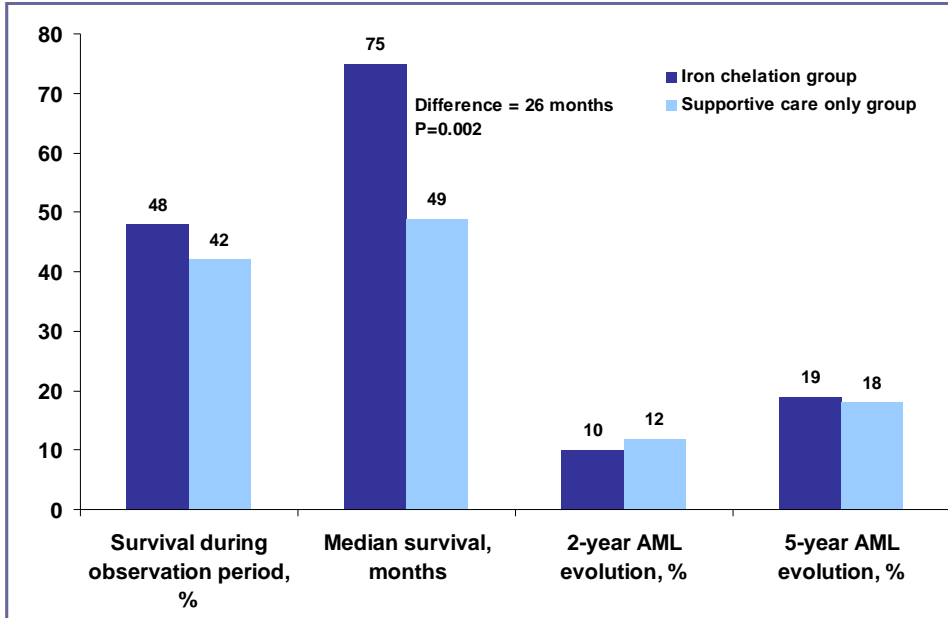
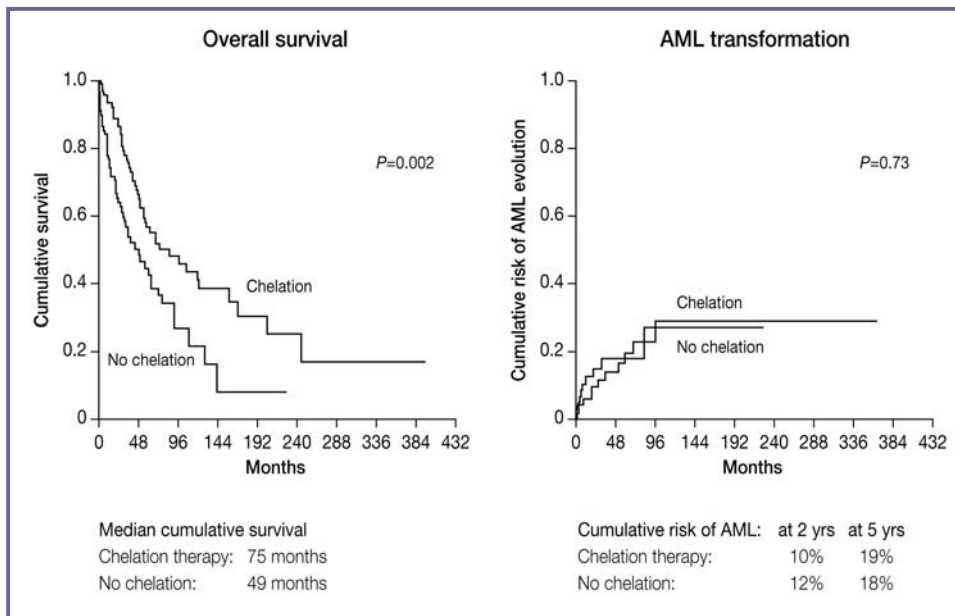


Figure 2. Impact of chelation therapy on survival and AML transformation



2009 Annual Meeting of the American Society of Hematology Highlights Report

This matched pair analysis corroborates previous observations suggesting that iron chelation therapy provides a significant survival benefit in transfusion-dependent patients with MDS. A currently recruiting prospective, placebo-controlled trial will provide additional evidence of the benefits of chelation therapy in this patient group. This retrospective analysis of registry data cannot determine which clinical complications were decreased with chelation therapy; this would be achieved by a prospective, randomized clinical trial such as the ongoing 2302 study.

References

1. Cazzola M, Malcovati L. Myelodysplastic syndromes - coping with ineffective hematopoiesis. *N Engl J Med* 2005;352:536-538.
2. Malcovati L, Della Porta MG, Pascutto C *et al*. Prognostic factors and life expectancy in myelodysplastic syndromes classified according to WHO criteria: a basis for clinical decision making. *J Clin Oncol* 2005;23:7594-7603.
3. Takatoku M, Uchiyama T, Okamoto S *et al*. Retrospective nationwide survey of Japanese patients with transfusion-dependent MDS and aplastic anemia highlights the negative impact of iron overload on morbidity/mortality. *Eur J Haematol* 2007;78:487-494.
4. Leitch HA. Improved survival in myelodysplastic syndromes patients receiving iron chelation therapy. *Leuk Res* 2007;31(Suppl 1):S15.
5. Rose C, Brechignac S, Vassilief D *et al*. Positive impact of iron chelation therapy (CT) on survival in regularly transfused MDS patients. A prospective analysis by the GFM. *Blood* 2007;110(11):abst 249.
6. Sanz G, Nomdedeu B, Such E *et al*. Independent impact of iron overload and transfusion dependency on survival and leukemic evolution in patients with myelodysplastic syndrome. *Blood* 2008;112(11):abst 640.
7. Gattermann N. Overview of guidelines on iron chelation therapy in patients with myelodysplastic syndromes and transfusional iron overload. *Int J Hematol* 2008;88:24-29.