





Figure 1. The five-tier RIMM organizational model.

ment of physicians. Other early evidence produced by the RIMM project was a hint about MMM epidemiology. The 72-year median age of the collected patients was older than the 54-62 year median age reported in literature<sup>1</sup> and 7.6 years higher than that which we had previously observed in an Italian multicenter study.<sup>3</sup> The older age of the population was attributable to the 60% of cases who received a diagnosis in Internal Medicine wards whose median age was 75 years compared to the 65 years of patients cared for in the Hematology Units (Mann-Whitney U test:  $U = 1228, p = 0.004$ ) (Table 1). This speaks in favor of a referral selection bias in multicenter studies. As to the quality of care, diagnostic guidelines proved to be a useful tool for standardization and education. According to the Italian Consensus Conference criteria for diagnosis,<sup>4</sup> a MMM patient should have the Philadelphia chromosome or the BCR-ABL molecular rearrangement searched for and found negative, and should have typical morphologic features on a peripheral blood smear, such as red cells with teardrop shape, immature myeloid cells and erythroblasts. In 55 cases, the diagnosis was reached by examination of blood samples or slides sent from the participating centers to the co-ordinating center.

Table 1. Data from the population-based Registry of Myelofibrosis with myeloid metaplasia (RIMM).

	Number (%)	Age (median and range in years)
Collected cases	168	72 (42-96)
Males	115 (68%)	72 (42-96)
Referred to RIMM from Internal Medicine Centers	104 (62%)	75 (51-96)
Referred to RIMM from Hematology Centers	64 (38%)	65 (42-90)

One requisite of the Registry was an exhaustive nationwide collection of cases. Even after a third invitation, we have not been able to involve all clinical Centers that may occasionally observe a case of MMM in Italy. We cannot, therefore, assess how many MMM patients are not reported. Cross-checking reporting from clinical wards with reporting from pathologists showed a 21% referral discordance that was almost eliminated after active co-ordinating center intervention. Nevertheless, the incidence of the disease, as emerging from this first year of activity of the Registry, is far lower than expected. Continuation of the study will give us information useful for widening the network of hospitals and for reassessing the reporting criteria.

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References

1. Barosi G. Myelofibrosis with myeloid metaplasia: diagnostic definition and prognostic classification for clinical studies and treatment guidelines. *J Clin Oncol* 1999; 17:2954-70.
2. McNally RJ, Rowland D, Roman E, Cartwright RA. Age and sex distributions of hematological malignancies in the U.K. *Hematol Oncol* 1997; 15:173-89.
3. Barosi G, Ambrosetti A, Centra A, et al. Splenectomy and risk of blast transformation in myelofibrosis with myeloid metaplasia. Italian Cooperative Study Group on Myeloid with Myeloid Metaplasia. *Blood* 1998; 91:3630-6.
4. Barosi G, Ambrosetti A, Finelli C, et al. The Italian Consensus Conference on Diagnostic Criteria for Myelofibrosis with Myeloid Metaplasia. *Br J Haematol* 1999; 104:730-7.

Advances in iron chelating therapy

Iron overload in chronically transfused patients is a serious complication giving rise to damage in organs such as the heart, liver, and endocrine system and leads to a shortened life-expectancy.<sup>1,2</sup> The introduction of the iron chelating agent deferoxamine, which prevents oxidative damage due to iron overload, has dramatically reduced the mortality and improved the quality of life in regularly transfused patients over the past twenty years.<sup>3-11</sup> However this therapy requires a high patient compliance since deferoxamine must be administered chronically by subcutaneous continuous infusion.<sup>12,13</sup> There has, therefore, been a search for a more effective and easier way to administer iron chelating