(76). Cladribine, a drug that kills T cells, is effective in treating at least 80% of patients with HCL. One week of therapy typically results in remissions lasting for a decade (77). Cladribine lacks the typical side effects of chemotherapy, such as nausea and alopecia, but it can facilitate infections from viruses or from *Pneumocystis jirovecii*, a fungus formerly known as *Pneumocystis carinii* (78). Cladribine is distinguished in that it is also used for treating multiple sclerosis, as detailed elsewhere in this book.

e. Myeloid neoplasms

1. Acute myeloid leukemia

In the United States, there are about 13,000 new cases of acute myeloid leukemia (AML) per year (79). AML accounts for about 25% of all leukemias in adults (80). The disease presents by fatigue, bruising or bleeding, fever, and infection (81). Cheson et al. (82,83) Feldman et al. (84) and Appelbaum et al. (85) provide some of the endpoints used in clinical trials against AML.

AML develops in individuals of all ages, although incidence increases with advancing age and rises dramatically in patients older than 65 years (86). In spite of therapy for AML, two-thirds of young adults and 90% of older adults still die of their disease (87). (But a rare subtype of AML, known as APL, is easily cured, as indicated below.)

Patients with AML show a heterogeneous response to therapy. The most frequent therapeutic approach is an initial phase (induction) with the combination of cytarabine and an anthracycline, which hopefully provides a remission, followed by post-remission chemotherapy (88).

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