

Hematological Cancers

I. INTRODUCTION

Cancers that are not solid tumors include hematological cancers, such as the leukemias and the myelodysplastic syndromes (MDS). Some of the hematological malignancies are listed in Table 17.1 (1). Hematological malignancies are sometimes called *liquid tumors* (2,3,4). This chapter concerns only the leukemias and the myelodysplastic syndromes. Other hematological cancers include multiple myeloma and the lymphomas.

The main purpose of this chapter is to explain endpoints, surrogate endpoints, and prognostic markers, relevant to the hematological cancers. The reason for covering these particular subjects is that they are part of trial design and are included in Clinical Study Protocols for these cancers. As is obvious, the main theme of much of this textbook is endpoints and biomarkers.

a. Classification of hematological cancers

Guidance for the classification of hematological cancers is available from the World Health Organization (WHO) (5,6,7). The WHO classification scheme is periodically revised, for example, to add genetic criteria to earlier existing criteria that mainly rely on morphologic, cytochemical, and immunohistological data. A separate classification scheme, that of the French-American-British (FAB) Cooperate Group, uses data on morphology and from cytochemical stains to classify the acute leukemias (8,9,10). The

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