Since 1978 more than 4500 adult ALL patients have been treated according to the protocols of the German Multicenter Study Group for Adult Acute Lymphoblastic Leukemia (GMALL). GMALL protocols are administered in hospitals all over Germany and the number of participating centers in Germany increased from 25 in 1981 to 120 in the most recent trial. Up to now seven consecutive trials for adult de novo ALL have been conducted. The major aim of all trials was the improvement of remission duration and survival of adult ALL patients, detailed diagnostic characterization, the development of prognostic models and the evaluation of risk-adapted, individualized and targeted treatment strategies. The time-periods and further aims of these studies are briefly summarized in Table 13.1.

Several accompanying trials of the GMALL have been initiated in parallel, such as treatment protocols for:

- Elderly patients with ALL and B-ALL
- Ph+ ALL
- B-ALL, Burkitt’s Lymphoma, and other high-grade lymphoma
- T-lymphoblastic lymphoma
- Relapsed ALL

These strategies can only partly be described in the following sections.
13.2 Therapy for Younger (15–65 Years) Patients with B-Precursor and T-Lineage ALL

13.2.1 GMALL Trials 01/81–07/03

In the earlier trials (01/81–05/93), an 8-week induction therapy with two phases was scheduled with several minor modifications [1]. All patients received reinduction therapy, and maintenance therapy with methotrexate (M) and 6-mercaptopurine (MP) was scheduled for a total treatment duration of approximately 2 1/2 years. The overall treatment outline of GMALL studies 01/81–07/03 is given in Fig. 13.1.

The results of earlier trials (01/81–04/89) have been summarized previously [1–4]. Major findings referred to identification of new prognostic factors, development of subgroup-specific and risk-adapted regimens, intensified consolidation and maintenance, and extended indications for stem cell transplantation (SCT). In study 03/87 it was shown that postponed (standard risk = SR patients) or omitted (high risk = HR patients) CNS irradiation was associated with inferior overall outcome and a higher rate of CNS relapse [1]. Complete remission (CR) rates, remission duration, and survival improved stepwise with significant differences between subgroups.