Table 17.3 Cytogenetics for favorable, intermediate, and poor prognosis for AML (*Continued*)

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[c]ERG is located on chromosome 21, at 21q22.3. ERG has GenBank Accession No. NM_004449.
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1. Numeric abnormalities in ALL

Patients with hyperdiploid ALL, in particular those with more than 50 chromosomes, have the best prognosis. Hypodiploidy (less than 44 chromosomes), which is found in less than 2% of pediatric or adult cases, predicts a poor outcome. The rare cases with low hypodiploidy (33 to 39 chromosomes) and near-haploidy (23 to 29 chromosomes) have a particularly poor prognosis.

2. Structural abnormality t(9;22) (Philadelphia chromosome) in ALL

The outcome of ALL patients with blasts containing the Philadelphia chromosome is poor (171). The Philadelphia chromosome in ALL may be different from that found in chronic myeloid leukemia (CML). In ALL, this chromosome involves band 34 of the long arm of chromosome 9, splicing the proto-oncogene c-*abl* to band 11 of the long arm of chromosome 22 in the *bcr* gene. In 50 to 80% of cases of ALL, the breakpoint in 22q11 falls between exons b1 and b2 of the major breakpoint cluster region, as opposed to between b2 and b3 or b3 and b4 in chronic myeloid leukemia. The difference is in the positions of the breakpoints occurring in the translocation, that is, breakpoints within the BCR gene. This difference in breakpoints results in a smaller

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