

Pathology Review

Chapter 17: Pediatric, Perinatal, and Placental Pathology

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103. List the types of small round blue cell tumors with distinct molecular abnormalities that can aid diagnosis.

- Neuroblastoma:
 - MYCN amplification.
 - 1p and 11q **loss**.
 - **17q** gain.
- Burkitt lymphoma:
 - c-myc translocations t(2;8), t(8;14), or t(8;22).
- Alveolar rhabdomyosarcoma.
 - PAX3/FKHR fusion gene, t(2;13)(q35;q14).
 - PAX7/FKHR fusion gene, t(1;13)(p36;q14).
- PNET/Ewing sarcoma.
 - FLI-1/EWS fusion, t(11;22)(q24;q12).
 - ERG/EWS fusion, t(21;22)(q22;q12).
 - ETV1/EWS fusion, t(7;22)(q22;q12).
- Wilms tumor.
 - WT gene deletion in 11p (incidence = 1:3 cases).
 - WT1, 11p 13.
 - WT2, 11p15.
- Desmoplastic small round cell tumor:
 - EWS/WT-1 fusion, t(11;22)(p13;q12).