

McCance: Pathophysiology, 6th Edition

Chapter 13: Cancer in Children

Key Points – Print

SUMMARY REVIEW

Incidence and Types

1. Cancer in children is rare, but is still the leading cause of death from disease.
2. Childhood cancers are extremely fast growing, with 80% having distant spread (metastases) at diagnosis.
3. Children tend to develop leukemias, brain tumors, and sarcomas.

Etiology

1. A number of host factors, many of which are genetic risk factors or congenital conditions, have been implicated in the development of childhood cancer
2. Oncogenes and tumor-suppressor genes have been associated with childhood malignancies.
3. Chromosome aberrations or single-gene defects including aneuploidy, amplifications, deletions, translocations, and fragility are associated with the development of childhood cancer.
4. Wilms tumor and retinoblastoma are pediatric malignancies that are linked in a familial manner.
5. Childhood exposure to ionizing radiation, drugs, or viruses has been associated with the risk of developing cancer.

Prognosis

1. More than 70% of children diagnosed with cancer are cured.
2. Young children are particularly prone to long-term sequelae of cancer therapy. It is imperative that more effective, targeted therapies with fewer side effects be found.