

Germ Cell Tumors (GCTs)

Definition:

These are benign or malignant tumours that arise from primitive cells that were destined to become the gonads (testes or ovaries); hence the term germ cells.

Sites:

They occur in the gonads (ovaries or testis) but also in the chest, sacrum (tail bone), and brain.

Etiology

Unknown

Classification:

Benign: Teratoma

Malignant: Germinoma (non-gonadal site)
Seminoma (testis)
Dysgerminoma (ovary)
Pineoblastoma (brain)
Non-Germinomatous Germ Cell Tumour
Embryonal Cell Carcinoma
Malignant Teratoma
Endodermal sinus tumour (Yolk sac Tumour)
Choriocarcinoma

Signs and Symptoms:

- Vary depending on site of presentation
 - ~ Testis - swelling of one testis
 - ~ Ovary - abdominal mass or swelling
 - ~ Sacrum swelling over tail bone/may present with difficulty in urination
 - ~ Brain - headache, difficulty in looking upwards (Parinauds syndrome)
- Sometimes patient will present with premature signs of puberty
- Sometimes present at birth (e.g benign teratoma)

Diagnostic Evaluation:

- Blood tests - These tumours may secrete tumour markers (alpha fetoprotein and Beta HCG)
- X-ray of involved site
- MR & CT scan of involved site
- Chromosomal analysis of the biopsy specimen should be undertaken as well as the blood.
- CT chest

Staging:

Staging system depends on site of primary disease. Currently the following Grouping system is used:

Low Risk: