

## Prognostic factors in testicular cancer

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## Adverse Prognostic factors in GCT Stage I disease

- Pathology critical
- **Seminoma (S)**
  - Size >4cm
  - Rete testis involvement (invasive more significant)
- **Non-seminoma (NS)**
  - Vascular invasion
  - % of embryonal carcinoma >50%
  - Proliferation index >70%
- S + NS managed as NS

## Prognostic factors in GCT Stage II and above

- **Pathology is less important**
- Only seminoma vs. non-seminoma is used to determine prognostic groupings
- Predominant seminoma with focal non-seminoma is managed as non-seminoma

## Metastatic GCT Prognostic groupings

Prognostic Group	Tumour type	5 Year Progression Free Survival (%)	5 Year Survival (%)
Good	Seminoma (90%)	82	86
	Non-seminoma (56%)	89	92
Intermediate	Seminoma (10%)	67	72
	Non-seminoma (28%)	75	80
Poor	Seminoma (None)	-	-
	Non-seminoma (16%)	41	48

## Stage II and above (Seminoma)

- **Only site of metastasis is important**
  - Non-pulmonary visceral metastasis (eg. liver):
    - Absent: good prognostic group
    - Present: intermediate prognostic group
- Seminoma with metastasis in lymph nodes and lung is in good prognostic group
- **Seminoma never in poor prognostic group**

## Stage II and above (Non-seminoma)

- **Prognostic grouping is based on**
  - Site of primary tumour
  - Site of metastasis
  - Serum marker levels
- Mediastinal primary or non-pulmonary visceral metastasis, or very high serum markers: poor prognosis group
- Otherwise good/intermediate based on serum marker levels

## **pT staging of GCT**

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- **pTX:** Primary tumour cannot be evaluated (no orchidectomy)
- **pT0:** No evidence of primary tumour in testis
- **pTis:** ITGCN
- **pT1:** Confined to testis, no vascular invasion
- **pT2:** Vascular invasion and/or extension through tunica albuginea
- **pT3:** Spermatic cord invasion
- **pT4:** Scrotal invasion

## **pT Staging of GCT Problems**

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- No seminoma/non-seminoma differentiation
- **Seminoma**
  - Size and rete testis invasion not included
  - Vascular invasion not useful in seminoma
- **Non-seminoma**
  - Percentage embryonal carcinoma not included
- Invasion of hilar fat and epididymis invasion not included
- Variable interpretation of pT stage definitions