

## Histological classification of Germ Cell tumours

	Working classification	Sub classification		Synonyms
<b>I</b>	Germinoma	A: Intratubular		Carcinoma <i>In situ</i>
		B: Invasive		Germinoma, dysgerminoma, seminoma
<b>II</b>	Teratoma	A: Mature		Benign teratoma, dermoid cyst, differentiated teratoma
		B: Immature	Grade 1 (immature tissue < 1 low power (x4) field (LPF)/slide)	
			Grade 2 (immature tissue 1-3 LPF/slide)	
			Grade 3 (immature tissue > 4 LPF/slide)	
		C: Teratoma with malignant non germ cell components		
<b>III</b>	Embryonal carcinoma		Undifferentiated malignant teratoma	
<b>IV</b>	Yolk sac tumour		Endodermal sinus tumour, infantile type of Embryonal carcinoma, orchioblastoma, Teilum tumour	
<b>V</b>	Choriocarcinoma		Trophoblastic malignant teratoma	
<b>VI</b>	Gonadoblastoma			
<b>VII</b>	Mixed malignant germ cell tumour (each component to be listed)			

**N.B Pathologists should be asked to classify the tumours according to the classification above (several different classifications exist)**

## Staging for Malignant Germ Cell Tumours at all sites – TNM classification

<b>T</b>	<b>Clinical/Radiological Staging (to be used in patients with no initial surgery)</b>	<b>Post surgical Staging (to be used in patients with biopsy/initial surgery)</b>		
<b>Primary Tumour</b>	<b>T0</b> No primary tumour (T)	<b>pT0</b> No tumour on histology		
	<b>T1</b> Localised T < 5cm	<b>pT1</b> Complete resection of localised tumour		
	<b>T2</b> Localised T > 5 cm and < 10 cm	<b>pT2</b> Complete resection of a T4 tumour		
	<b>T3</b> Localised T > 10 cm		<b>pT3</b> Residual tumour	<b>pT3a</b> microscopic (+ ascites for ovarian tumours)
				<b>pT3b</b> macroscopic
				<b>pT3c</b> biopsy alone
	<b>T4</b> T of any size with locoregional extension			
<b>T5</b> Bilateral				
<b>Tx</b> Unknown	<b>pTx</b> Unknown			
<b>N</b>				
<b>Regional lymph node</b>	<b>N0</b> No lymph node involved	<b>pN0</b> No regional nodes		
	<b>N1</b> Clinical or imaging node involvement	<b>pN1</b> Involvement of regional nodes	<b>pN1a</b> completely removed	
			<b>pN1b</b> incompletely removed	
<b>Nx</b> Unknown	<b>pNx</b> Unknown			
<b>M</b>				
<b>Metastasis</b>	<b>M0</b> No metastasis	<b>pM0</b> No metastasis		
	<b>M1</b> Metastases present (including distant nodes – lumbar-aortic are locoregional for testicular tumours)	<b>pM1</b> Metastases present including distant nodes		
	<b>Mx</b> Unknown	<b>pMx</b> Unknown		

## Staging for Malignant Germ Cell Tumours at all sites

Stages	Clinical			Stages	Postsurgical		
<b>1</b>	T1	NONx	M0	<b>1</b>	pT1	pN0pNx	pM0
<b>2</b>	T2,3	NONx	M0	<b>2</b>	pT1	pN1a	pM0
					pT2	pN0pNxpN1a	pM0
<b>3</b>	T1,2,3	N1	M0	<b>3</b>	pT3b+c	All pN	pM0
					pT2	pN1b	pM0
	T4	Any N	M0		pT3a	pN0pNxpN1a	pM0
<b>4</b>	All T	Any N	M1	<b>4</b>	All pT	All pN	pM1

## Risk groups for extracranial malignant germ cell tumours

Low risk	Intermediate risk	High risk
<ul style="list-style-type: none"> <li>Gonadal stage 1 tumours (regardless of AFP level if secreting)</li> <li>Boys who had an initial trans-scrotal biopsy but otherwise stage 1 can be included on condition of very close follow-up</li> <li>Total resection of extragonadal tumour and serum marker fall to normal</li> </ul>	<ul style="list-style-type: none"> <li>Testis &lt; 5 years, any AFP, stage 2-4</li> <li>Testis <math>\geq</math> 5 years, AFP &lt; 10.000 kU/L, Stage 2+3</li> <li>All other sites, AFP &lt; 10.000 kU/L, Stage 2+3 <u>except</u> thoracic tumours</li> <li>Pure germinoma/seminoma, any site, Stage 2-4</li> <li>Pure hCG secreting tumours, any hCG, Stage 2+3</li> </ul>	<ul style="list-style-type: none"> <li>All Stage 4 tumours <u>except</u> testis &lt; 5 years and germinoma/seminoma</li> <li>AFP <math>\geq</math> 10.000 kU/L <u>except</u> all Stage 1 tumours and testis &lt; 5 years Stage 2-4</li> <li>All thoracic tumours, Stage 2-4</li> </ul>