Rare Tumours of Male Genital Organs

1. Epithelial Tumours of Prostate

1.1 General Results

Table 1. Epithelial Tumours of Prostate: Incidence, Trends, Survival

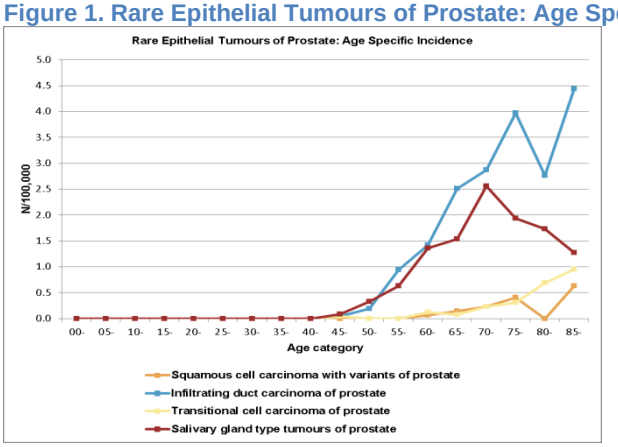
Flemish Region 2001-2010		Incidence				Trend		Survival	
Males						EAPC		Relative survival	
	R/C	N	CR	WSR	Avg Age	%	p-value	N at risk	5yr (%)
EPITHELIAL TUMOURS OF PROSTATE	C	56,753	189.26	98.42	70	-0.4	0.564	52,728	95.0
Adenocarcinoma with variants of prostate	C	56,020	186.81	97.30	69	-0.3	0.681	52,058	95.3
Squamous cell carcinoma with variants of prostate	R	12	0.04	0.02	75	*	*	10	*
Infiltrating duct carcinoma of prostate	R	188	0.63	0.32	71	-8.8	0.191	171	81.5
Transitional cell carcinoma of prostate	R	17	0.06	0.03	75	*	*	14	*
Salivary gland type tumours of prostate	R	131	0.44	0.23	68	25.9	0.030	124	101.8

R/C: Rare or common
CR: Crude rate (N/100,000 person years)
WSR: age-standardised rate, using the world population (N/100,000 person years)
EAPC: estimated annual percentage change
RS: relative survival
AvgAge: average age at diagnosis

1.2 Incidence

- 56,753 new epithelial tumours of the prostate are diagnosed in the Flemish Region between 2001 and 2010.
- RARECARE defines one common and four rare entities:
  - 99% of prostate carcinoma are common adenocarcinoma.
  - Squamous cell carcinoma in the Flemish Region represent only 12 cases.
  - Infiltrating duct carcinoma is the most frequently occurring rare entity with 188 new diagnoses.
  - Only 17 cases of transitional prostate carcinoma are observed.
  - Salivary gland type tumours account for 131 new diagnoses.

Figure 1. Rare Epithelial Tumours of Prostate: Age Specific Incidence



Belgian Cancer Registry

- Prostate tumours only rarely occur in patients younger than 50 years of age.
- From the age of 50 years, age specific incidence rates increase.

1.3 Survival

1.3.1 Overall Survival

Table 2. Epithelial Tumours of Prostate - Overall Survival

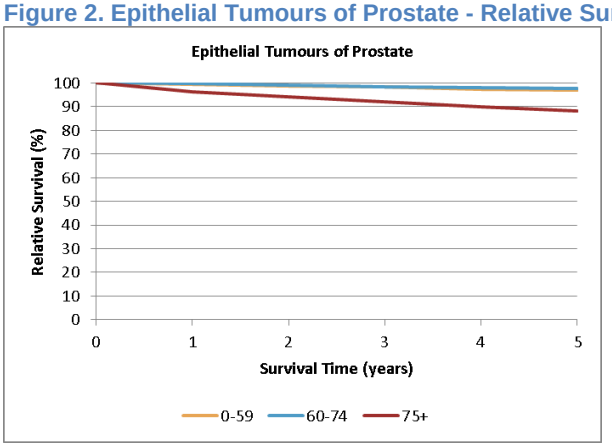
	N	Observed Survival					Relative Survival				
	at risk	1 year	3 year	5 year	10 year	5 year CI	1 year	3 year	5 year	10 year	5 year CI
EPITELIAL TUMOURS OF PROSTATE	52,728	95.1	86.0	77.7	58.3	[77.3 ; 78.1]	98.7	96.6	95.0	91.9	[94.5 ; 95.4]
Adenocarcinoma with variants	52,058	95.3	86.3	78.1	58.7	[77.7 ; 78.5]	98.9	96.9	95.3	92.3	[91.2 ; 93.4]
Squamous cell carcinoma with variants	10	*	*	*	*	*	*	*	*	*	*
Infiltrating duct carcinoma	171	93.6	77.3	66.0	43.6	[57.8 ; 73.0]	98.0	88.1	81.5	65.3	[71.3 ; 90.1]
Transitional cell carcinoma	14	*	*	*	*	*	*	*	*	*	*
Salivary gland type tumours	124	98.4	93.2	86.4	57.4	[78.0 ; 91.8]	101.6	102.8	101.8	93.4	[91.9 ; 108.1]

* No survival results are shown because the number at risk is lower than 35.

- Overall survival of prostate tumours is good, with a relative 10 year survival of 91.9%. This is remarkably worse in infiltrating duct carcinoma.

1.3.2 Survival by Age Group[1]

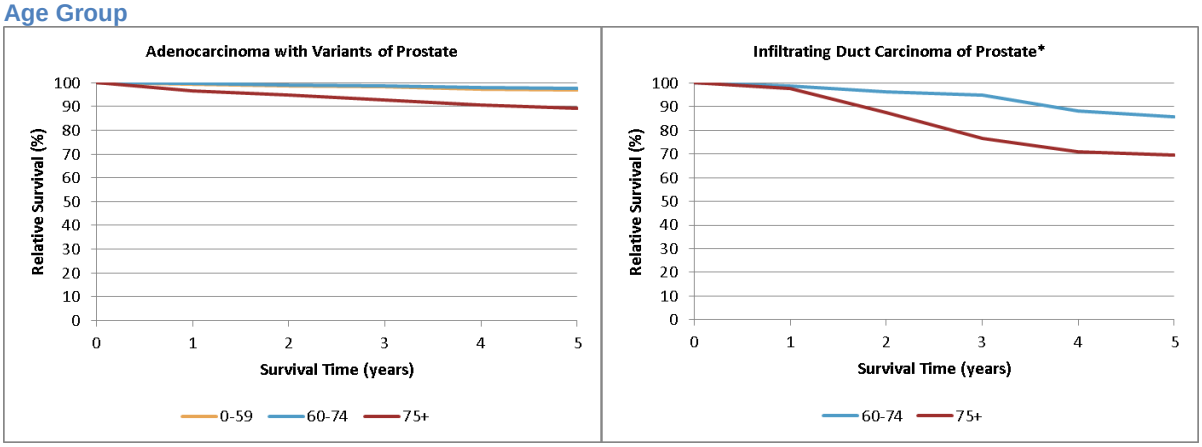
Figure 2. Epithelial Tumours of Prostate - Relative Survival by Age Group



- Epithelial tumours of the prostate have a very good prognosis. The 5-year relative survival is somewhat worse for the 75+ age group although it reaches almost 90%.

[1] Survival by age group is not displayed for salivary glands type tumours of prostate because only stage II has a number at risk higher than 35.

Figure 3. Adenocarcinoma with Variants, Infiltrating Duct Carcinoma of Prostate - Relative Survival by Age Group

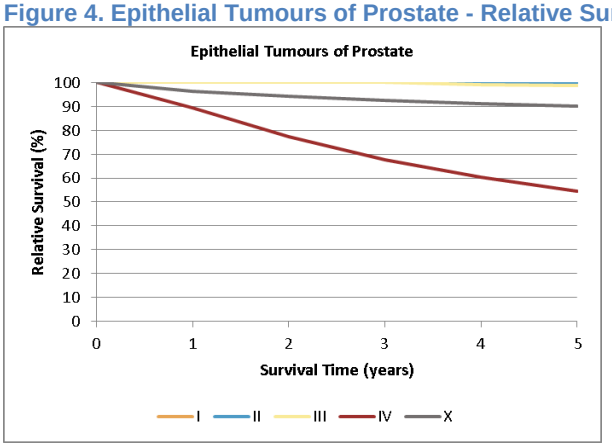


* Survival of patients aged in the age group 0-59 is not shown because the number at risk is lower than 35

- The poorer survival for infiltrating duct carcinoma of the prostate compared with the other histology groups is observed in all different age groups.

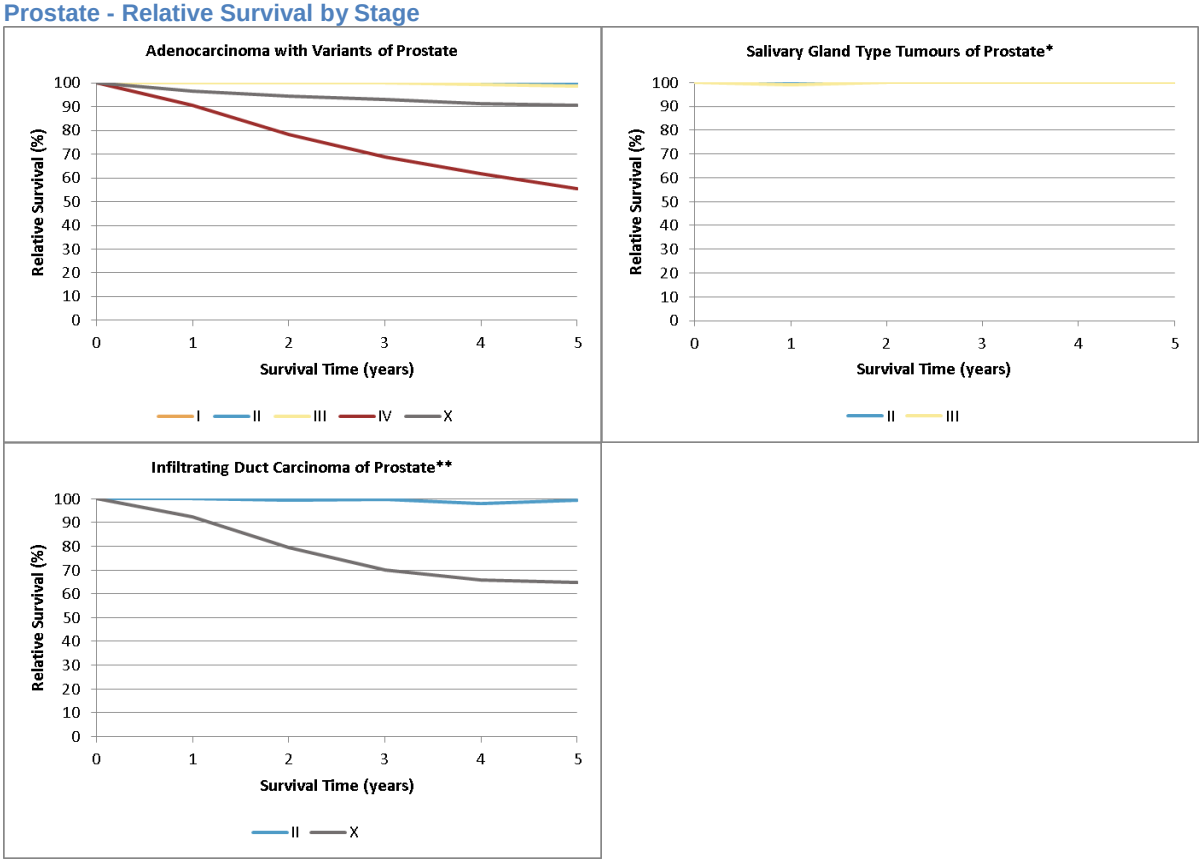
1.3.3 Survival by Stage

Figure 4. Epithelial Tumours of Prostate - Relative Survival by Stage



- All stages, except stage IV, have a good prognosis.

Figure 5. Adenocarcinoma with Variants, Infiltrating Duct Carcinoma and Salivary Gland Type Tumours of Prostate - Relative Survival by Stage



* Survival of stage I, IV is not shown because the number at risk is lower than 35.
** Survival of stage I, III and IV is not shown because the number at risk is lower than 35.

2. Tumours of Testis and Paratestis

2.1 General Results

Table 3. Tumours of Testis and Paratestis: Incidence, Trends, Survival

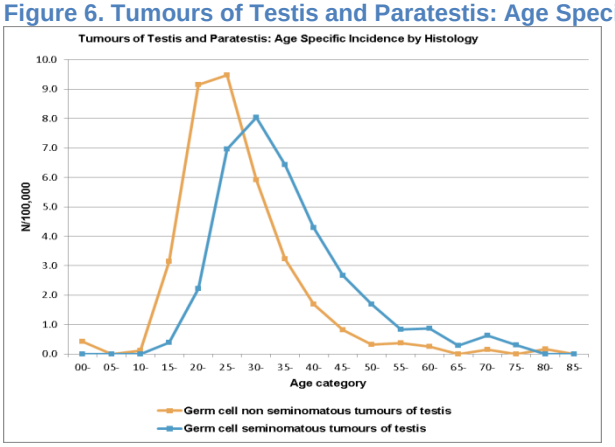
Flemish Region 2001-2010	Incidence					Trend		Survival	
Males						EAPC		Relative survival	
	R/C	N	CR	WSR	Avg Age	%	p-value	N at risk	5yr (%)
TUMOURS OF TESTIS AND PARATESTIS	R	1,503	5.01	5.01	34	4.7	0.002	1,421	96.4
Adenocarcinoma with variants of paratestis	R	3	0.01	0.01	61	*	*	3	*
Germ cell non seminomatous tumours of testis	R	690	2.30	2.58	29	7.4	<0.001	669	95.9
Germ cell seminomatous tumours of testis	R	737	2.46	2.23	37	2.8	0.157	686	97.4
Spermatocytic seminoma	R	16	0.05	0.03	60	*	*	16	*
Teratoma with malignant transformation	R	0	-	-	-	-	-	0	-
Sex cord tumours of testis	R	26	0.09	0.07	43	*	*	21	*

R/C: Rare or common
CR: Crude rate (N/100,000 person years)
WSR: age-standardised rate, using the world population (N/100,000 person years)
EAPC: estimated annual percentage change
RS: relative survival
AvgAge: average age at diagnosis

2.2 Incidence

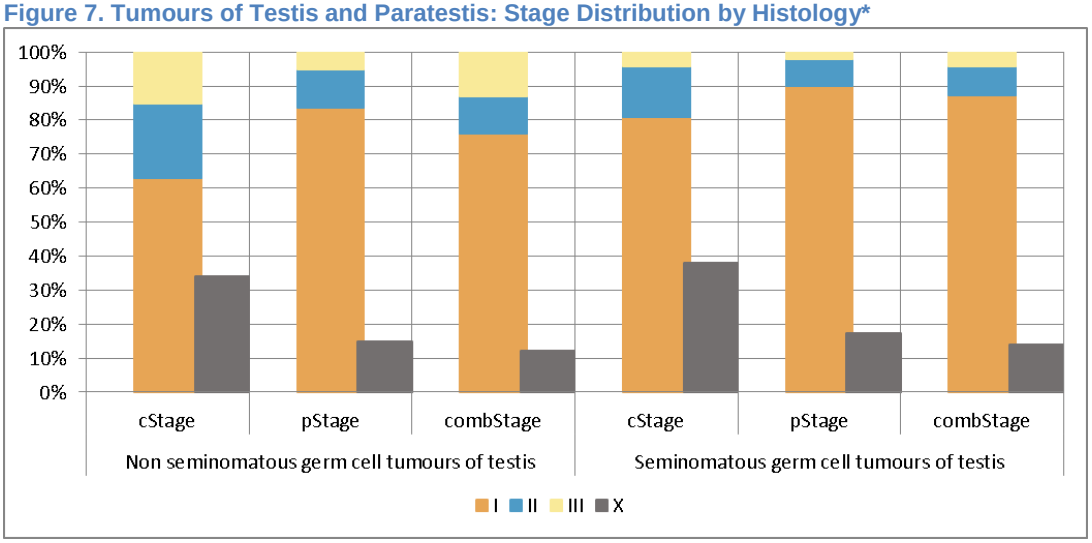
- 1,503 new epithelial tumours of the testis and paratestis are diagnosed in the Flemish Region between 2001 and 2010.
- RARECARE defines six rare entities:
    - Only three adenocarcinoma with variants of paratestis are registered.
    - Germ cell tumours represent 95% of testicular tumours; slightly more seminomatous than non seminomatous germ cell tumours are registered.
    - Spermatocytic seminoma accounts for 16 new diagnoses.
    - No teratoma with malignant transformation is observed in the Flemish Region between 2001 and 2010.
    - 26 cases are sex cord testicular tumours.

Figure 6. Tumours of Testis and Paratestis: Age Specific Incidence by Histology



- Non-seminomatous tumours show an incidence peak between 20 and 25 years, seminomatous germ cell tumours show a similar age specific curve, with a ten year delay.

Figure 7. Tumours of Testis and Paratestis: Stage Distribution by Histology*



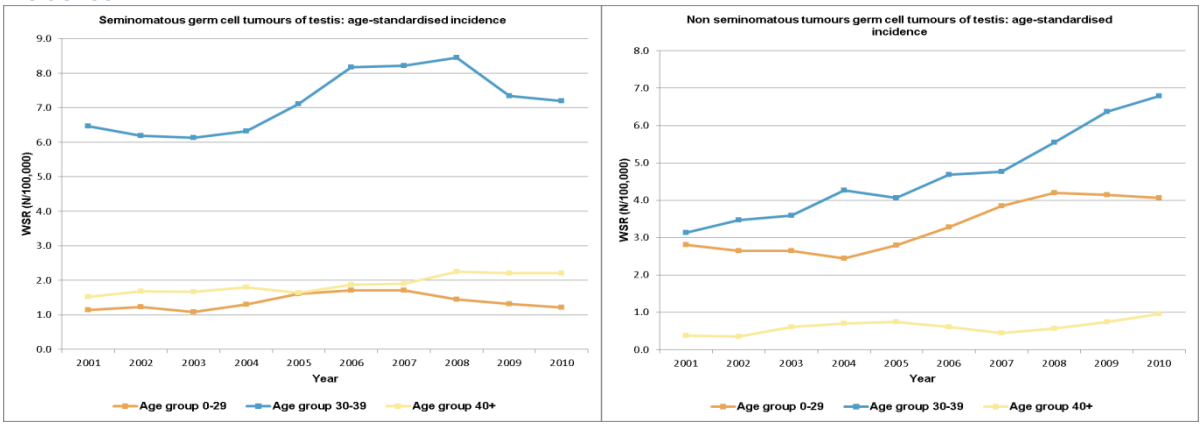
* Stage IV does not exists in the staging of testicular cancer.

- Information on stage is missing in about 10-15% of the cases. Pathological staging is more frequently available than clinical staging.

- Clinical staging reveals more stage II and III tumours than pathological staging.
- Non-seminomatous germ cell tumours have a slightly less favourable prognostic stage distribution than seminomatous germ cell tumours.

2.3 Trends

Figure 8. Seminomatous and Non-Seminomatous Germ Cell Tumours of Testis: Age-Standardised Incidence



- There is an increase of the incidence in the age group 30-39 years for both subtypes although more pronounced for non-seminomatous tumors.
- For non-seminomatour tumours, the youngest age group also shows an increasing incidence but less obvious than the age group 30-39 years.

2.4 Survival

2.4.1 Overall Survival

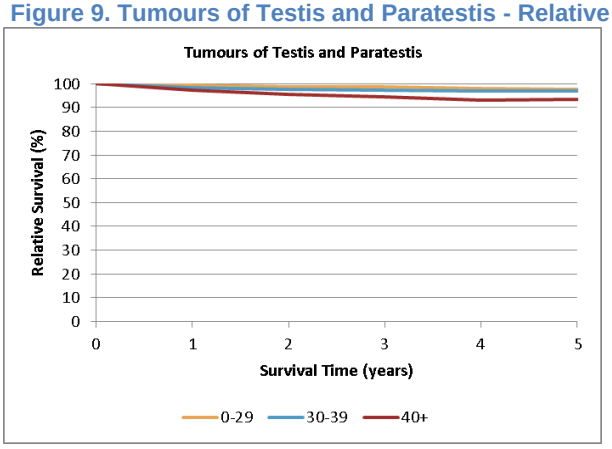
Table 4. Tumours of Testis and Paratestis - Overall Survival

	N	Observed Survival					Relative Survival				
	at risk	1 year	3 year	5 year	10 year	5 year CI	1 year	3 year	5 year	10 year	5 year CI
TUMOURS OF TESTIS AND PARATESTIS	1,421	98.2	96.5	95.2	93.6	[93.9 ; 96.3]	98.5	97.2	96.4	96.4	[95.0 ; 97.4]
Adenocarcinoma with variants of paratestis	3	*	*	*	*	*	*	*	*	*	*
Germ cell non seminomatous tumours of testis	669	98.8	96.6	95.3	93.7	[95.3 ; 93.3]	98.9	97.0	95.9	95.0	[93.8 ; 97.4]
Germ cell seminomatous tumours of testis	686	98.1	97.3	96.2	94.4	[94.3 ; 97.4]	98.3	98.0	97.4	97.2	[95.5 ; 98.6]
Spermatocytic seminoma	16	*	*	*	*	*	*	*	*	*	*
Teratoma with malignant transformation	0	-	-	-	-	-	-	-	-	-	-
Sex cord tumours of testis	21	*	*	*	*	*	*	*	*	*	*

- Testicular cancers have a very good prognosis, with a 5-year relative survival of 95.9% for germ cell non-seminomatous tumours and 97.4% for germ cell seminomatous tumours.

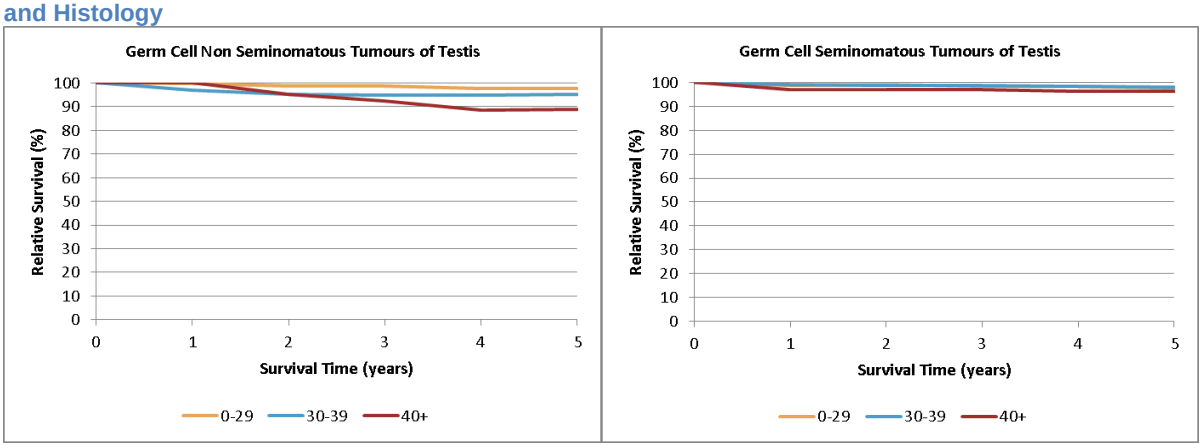
2.4.2 Survival by Age Group

Figure 9. Tumours of Testis and Paratestis - Relative Survival by Age Group



- The prognosis of testicular and paratesticular cancer is very good, with an almost 100% relative 5-year survival in the age group of 0-29 years.
- In patients of 40 years and older, the prognosis is still very good although not as good as in the youngest population groups.

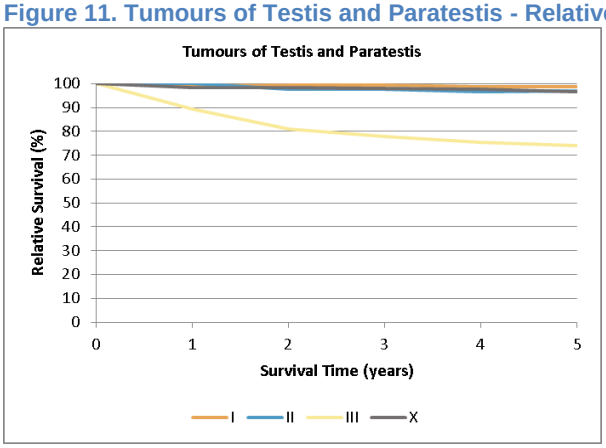
Figure 10. Germ Cell Seminomatous and Non-Seminomatous Tumours of Testis - Relative Survival by Age and Histology



- Seminomatous tumours have the best prognosis with a relative 5-year survival of almost 100%.
- For non-seminomatous germ cell cancers, especially the patients of 40 years and older have a less optimal outcome.

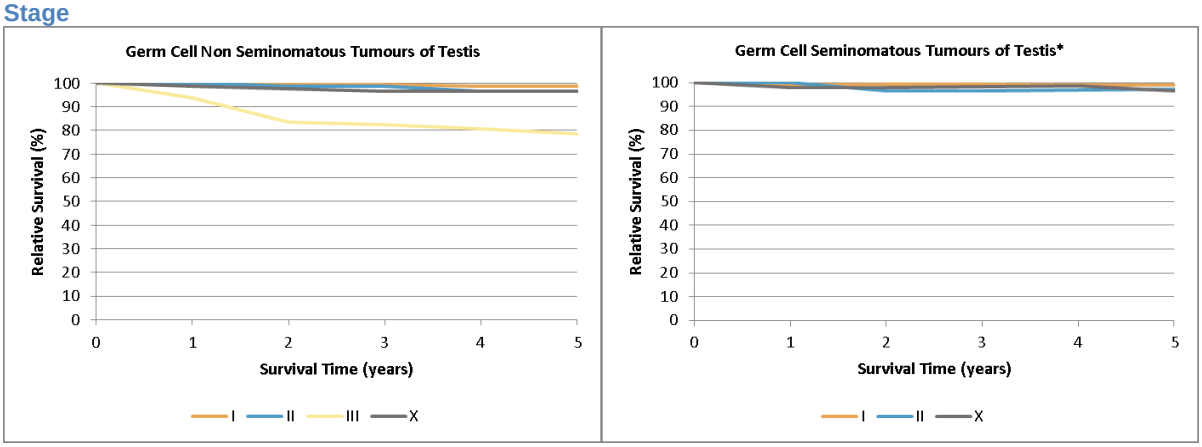
2.4.3 Survival by Stage

Figure 11. Tumours of Testis and Paratestis - Relative Survival by Stage



- Prognosis is very good for stage I, II and X disease but worse for stage III disease, with a less than 75% 5-year relative survival rate.

Figure 12. Germ Cell Seminomatous and Non-Seminomatous Tumours of Testis - Relative Survival by Stage



* Survival of stage III is not shown because the number at risk is lower than 35.

- Prognosis is very good in seminomatous tumours for which almost no stage III diseases are registered (n=26).
- There is a larger proportion of stage III diseases in the non-seminomatous group (n=80), with a worse prognosis. Prognosis of stage I and II is comparable between the two different histological groups.

3. Epithelial Tumours of Penis

3.1 General Results

Table 5. Epithelial Tumours of Penis: Incidence, Trends, Survival

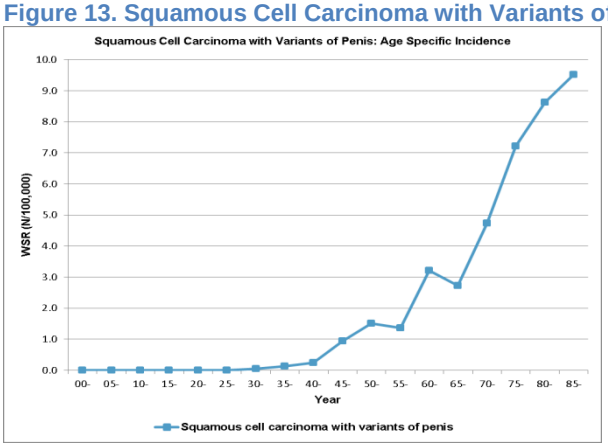
Flemish Region 2001-2010		Incidence				Trend		Survival	
Males						EAPC		Relative survival	
	R/C	N	CR	WSR	Avg Age	%	p-value	N at risk	5yr (%)
EPITHELIAL TUMOURS OF PENIS	R	406	1.35	1.05	69	4.5	0.009	351	69.8
Squamous cell carcinoma with variants of penis	R	393	1.31	1.02	69	4.8	0.012	346	70.7
Adenocarcinoma with variants of penis	R	5	0.02	0.01	76	*	*	3	*

R/C: Rare or common
CR: Crude rate (N/100,000 person years)
WSR: age-standardised rate, using the world population (N/100,000 person years)
EAPC: estimated annual percentage change
RS: relative survival
AvgAge: average age at diagnosis

3.2 Incidence

- 406 new epithelial penile tumours are diagnosed in the Flemish Region between 2001 and 2010.
- RARECARE defines two rare entities:
  - The majority are squamous cell carcinoma.
  - Only 5 adenocarcinoma are observed.

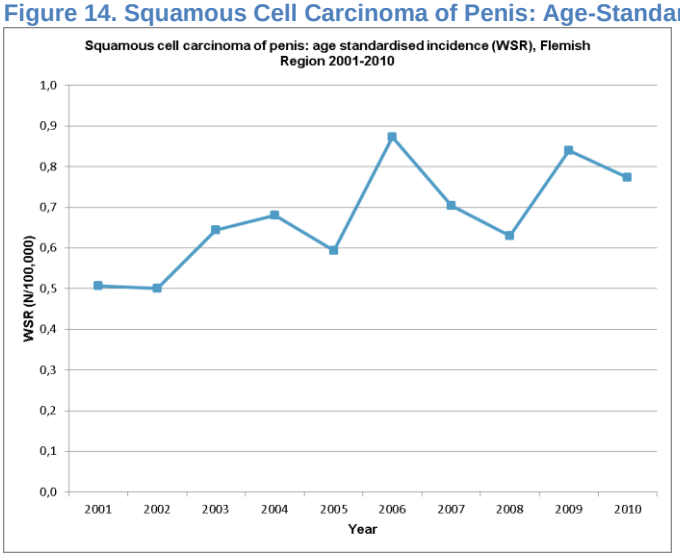
Figure 13. Squamous Cell Carcinoma with Variants of Penis: Age Specific Incidence



- From the age of 45 years, age specific incidence rates increase rapidly.

3.3 Trends

Figure 14. Squamous Cell Carcinoma of Penis: Age-Standardised Incidence



- As it is impossible to define the skin of penis separately, penal 'skin-tumours' are included. The observed increase in squamous cell carcinoma of the penis is therefore possibly linked to the known increase in non-melanoma skin cancer.

3.4 Survival

3.4.1 Overall Survival

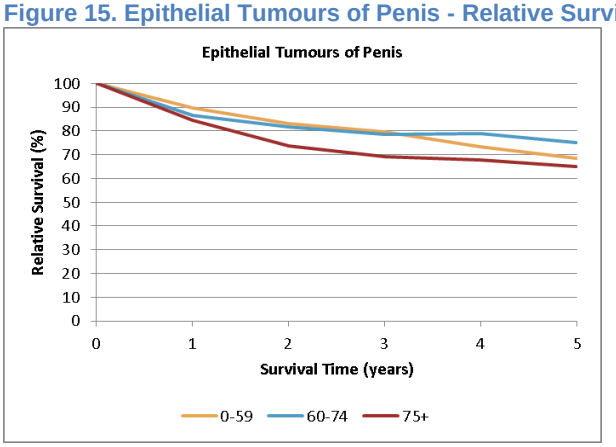
Table 6. Epithelial Tumours of Penis - Overall Survival

	N	Observed Survival					Relative Survival				
	at risk	1 year	3 year	5 year	10 year	5 year CI	1 year	3 year	5 year	10 year	5 year CI
EPITHELIAL TUMOURS OF PENIS	351	83.2	66.9	56.4	39.4	[50.6 ; 61.9]	86.7	75.7	69.8	64.0	[62.6 ; 76.5]
Squamous cell carcinoma with variants	346	83.5	67.4	57.1	40.5	[51.2 ; 62.5]	87.0	76.1	70.7	65.8	[63.4 ; 77.4]
Adenocarcinoma with variants	3	*	*	*	*	*	*	*	*	*	*

- Penile cancers have a moderate prognosis with a relative 5-year survival of almost 70%.

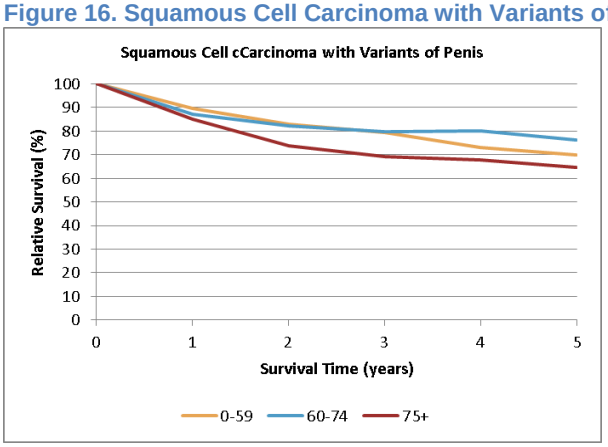
3.4.2 Survival by Age Group

Figure 15. Epithelial Tumours of Penis - Relative Survival by Age Group



- Prognosis is poorer for older patients (75 years and older) than for younger patients.

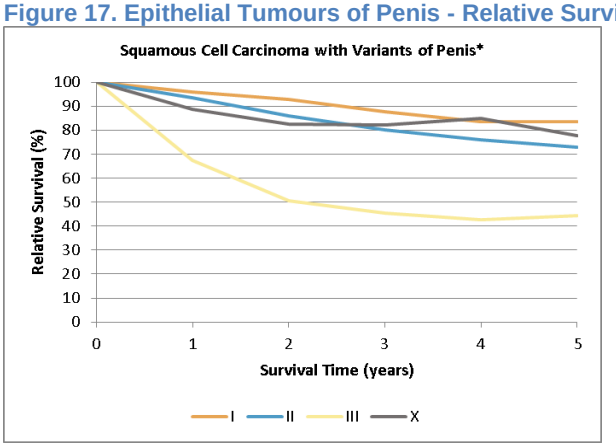
Figure 16. Squamous Cell Carcinoma with Variants of Penis - Relative Survival by Age Group



- Because almost all patients with an epithelial tumour of the penis are diagnosed with a squamous cell carcinoma, survival by age group is very similar for the squamous cell carcinoma as for all epithelial tumours of the penis together.

3.4.3 Survival by Stage

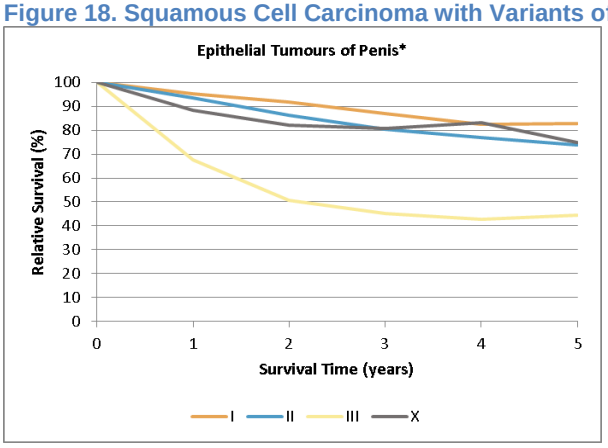
Figure 17. Epithelial Tumours of Penis - Relative Survival by Stage



* Survival of stage IV is not shown because the number at risk is lower than 35.

- Prognosis is worse in more advanced stage, with a 5-year relative survival in stage III disease of less than 50%.
- There is a comparable prognosis between stage I and II disease.

Figure 18. Squamous Cell Carcinoma with Variants of Penis - Relative Survival by Stage



* Survival of stage IV is not shown because the number at risk is lower than 35.

- Because almost all patients with an epithelial tumour of the penis are diagnosed with a squamous cell carcinoma, survival by stage is very similar for squamous cell carcinoma as for all epithelial tumours of the penis together.