

How can we improve and make more useful the urothelial tumours registration? First results of the GRELL collaborative study

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Introduction

In comparison with other cancers, bladder cancer registration raises specific issues due to the importance/occurrence of non-invasive papillary (Ta) or flat (carcinoma in situ –Tis-) tumours. The coding of non-invasive papillary urothelial bladder cancer is known to be difficult for cancer registries.

National and international variation in the registration of bladder cancer

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http://www-dep.iarc.fr/nordcan/English/database.asp

The incidence of bladder tumours may not be comparable between the Nordic countries due to varying coding practice over time concerning non invasive tumours; included all years in Denmark and never in Finland.



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Cancer Registry Problems in Classifying Invasive Bladder Cancer Charles F. Lynch1, Charles E. Platz, Michael P. Jones and Jeanne M. Gazzaniga

Introduction

Urinary tract cancer, 1998-2009. Recurrences & progressions

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Incidence. 1998-2009

HISTOLOGICAL TYPE	Incidence according to the first positive biopsy			Incidence according to the most advanced positive biopsy		
	Ν	%	ASRw	N	%	ASRw
NO INVASIVE LOW GRADE	820	30,1	5,8	706	25,9	5,0
NO INVASIVE HIGH GRADE	72	2,6	0,5	79	2,9	0,5
IN SITU	55	2,0	0,4	46	1,7	0,3
INVASIVE	1.645	60,4	10,5	1.793	65,9	11,5
OTHER INVASIVES	35	1,3	0,2	38	1,4	0,2
NO DEFINED	95	3,5	0,6	60	2,2	0,3
TOTAL	2.722	100,0	18	2.722	100,0	17,8

The pathways from normal urothelium to invasive carcinoma





Introduction

Objective: To analyse registration practices concerning bladder tumours in selected cancer registries operating in the GRELL countries and their impact on incidence.

Methods: Data from 41 Cancer registries contributing to ECIS and covering a period of 20 years. The percent ratio between the highest absolute difference in country-specific ASRs (range) and the

overall ASR of the country (range/ASR*100: r/R%) (by country, scenario and sex).

Three scenarios were compared:

- 1) Invasive tumours
- 2) All cases, invasive and non-invasive
- 3) All cases with the application of the current Multiple Primary Tumour rules and correction of the warnings identified by the JRC-ENCR Quality Check Software.

Conclusions:

- Wide variability of bladder cancer incidence, within and between registries.
- This variability could be due, at least partially, to the case definition and registration practices of cancer registries.
- Further harmonisation in registration practices is essential for proper comparability and interpretation of bladder cancer incidence rates in Europe.

Introduction

Differences in the definition, criteria of inclusion and codification of urothelial tumours (UT) in cancers registries (CRs)

⇒Lack of comparability and difficulty to understand trends in incidence and survival

Clinical considerations

- If all UTs are considered as cancer:
 - Need to record all UTs
- Significant potential of progression despite treatment:
 - Interest in analysing the incidence of progression of non-infiltrating UTs.
- UTs described according to their stage or grade rather than their behaviour:
 - E.g.: pTa-pTis-pT1 considered together, clinical relevance of the transition to ≥pT2 tumours



- To analyse the current practices of recording, codification and reporting of the UT of the urinary tract (C65-C68) in the CRs of GRELL countries.
- To propose recommendations to record and to use these tumours in the calculation of incidence and survival, depending on the pursued objectives.

Methods

- Questionnaire 1 (Q1) to assess how the following situations are taken into account in tumour recording and reporting:
 - Non-invasive UTs
 - Multiple UTs
 - UTs occurring outside or before the operating period
 - Time between UTs
- Questionnaire 2 (Q2) to assess coding practices concerning composite UTs and behaviour when the level of invasion is unclear.
- 91 European GRELL CRs contacted.
- 42 participants(46%).
- Contact by email in case of missing data or need of confirmation

Methods



(* Grade only if not invasive)

and Grade*_ you use

behaviour : /____you use

Participating CRs by country



Number of CRs contacted

Results – Q1 In situ bladder tumour?



Non-invasive high grade bladder tumour?

Non-invasive high grade bladder tumour?



Non-invasive high grade tumour of renal pelvis?



Non-invasive low grade bladder tumour



2 bladder tumours but with different behaviour?





Many progressions of bladder tumours?

➡ More and more heterogeneous



	RECORDING	REPORTING
Only the 1 st (non-invasive)	8	18
Only the 4 th (invasive)	1*	13
1 st + 4 th	13	6
$1^{st} + 2^{nd} + 4^{th}$	8	2
$1^{st} + 3^{rd} + 4^{th}$	3	0
Only the 2 nd	0	1
3 rd + 4 th	0	1
All the tumours	9	0
None of the tumour	0	1

Tumours with different location but same behaviour?





Tumours with different location and behaviour?



* 1 CR do not record the non-invasive tumour of the bladder since an invasive UT comes after

2 bladder tumours with different behaviour

occuring within a short period of time?





2 invasive tumours with ≠ location but same behaviour

occuring within a short period of time?





2 tumours with ≠ location and behaviour in a short period of time,

followed by an invasive progression of the bladder tumour?





Recurrence of an invasive bladder tumour when the 1st tumour

occured outside or before the operating period?



Composite tumours

Urothelial carcinoma with epidermoid component

	N %
8120 (urothelial)	38 <i>90</i>
8070 (squamous)	1
8575 (metaplasic)	2
8120/8070	1

Urothelial carcinoma with adenocarcinomatous component

	Ν	%	_
8120 (urothelial)	34	81	
8140 (adenocarcinoma)	4		
8575 (metaplasic)	2		
8120/8140	1		
8120/8255	1		

Urothelial carcinoma with neuroendocrine component

	Ν	%
8120 (urothelial)	36	86
8041 (small cell)	3	
8574 (adk with neuroendoc. diff.)	1	
8120/8041	1	
8120 & 8041	1	

Neuroendocrine carcinoma (98%) with urothelial carcinoma

	N	%
8041 (small cell)	24 3	57
8045 (combined small cell)	3	
8120 (urothelial)	4	
8246 (neuroendocrine)	4	
8246 / 8041	2	
8120 & 8041	2	
8246/8240	1	
8041/8013	1	
8045/8240/8013	1	

0.0

Results – Q2 Doubt about level of invasion (*)



(*) No muscularis propia (detrusor muscle) on resection

Conclusion

- Most of CRs already record more UT than they report: possibility to report them if needed
- But great heterogeneity in recording, coding and reporting especially when the situation becomes more complex
- Heterogeneity within the same registry

⇒ Urgent need of defining clear rules/recommendations for recording & reporting UTs taking into account the multiple objectives (incidence, survival).

 Proposal: To create a Working group in the ENCR to discuss this topic and create rules/recommendations for the European CRs.

Conclusion

Recording (inclusion or not), coding, classification and reporting (accounting or not in the statistics of incidence and survival) of urothelial tumours requires the application of criteria that should take into account the combination of the following aspects:

- The primary site
- The histology type
- The grade
- The extent of invasion
- The subjectivity among pathologists
- The multi-centricity
- The recurrences and the interval of time between tumours
- The progressions and the interval of time between tumours
- The difficulties in the obtaining of result of biopsies
- The recording or not of stage
- The existence of tumours diagnosed before the registry's period of recording
- The residence of patients at the moment of diagnosis of each tumour.
- The standard criteria of multiplicity

Thank you very much!!





