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Joint Research Centre



JRC-ENCR Quality Check Software (QCS): interpretation of the output



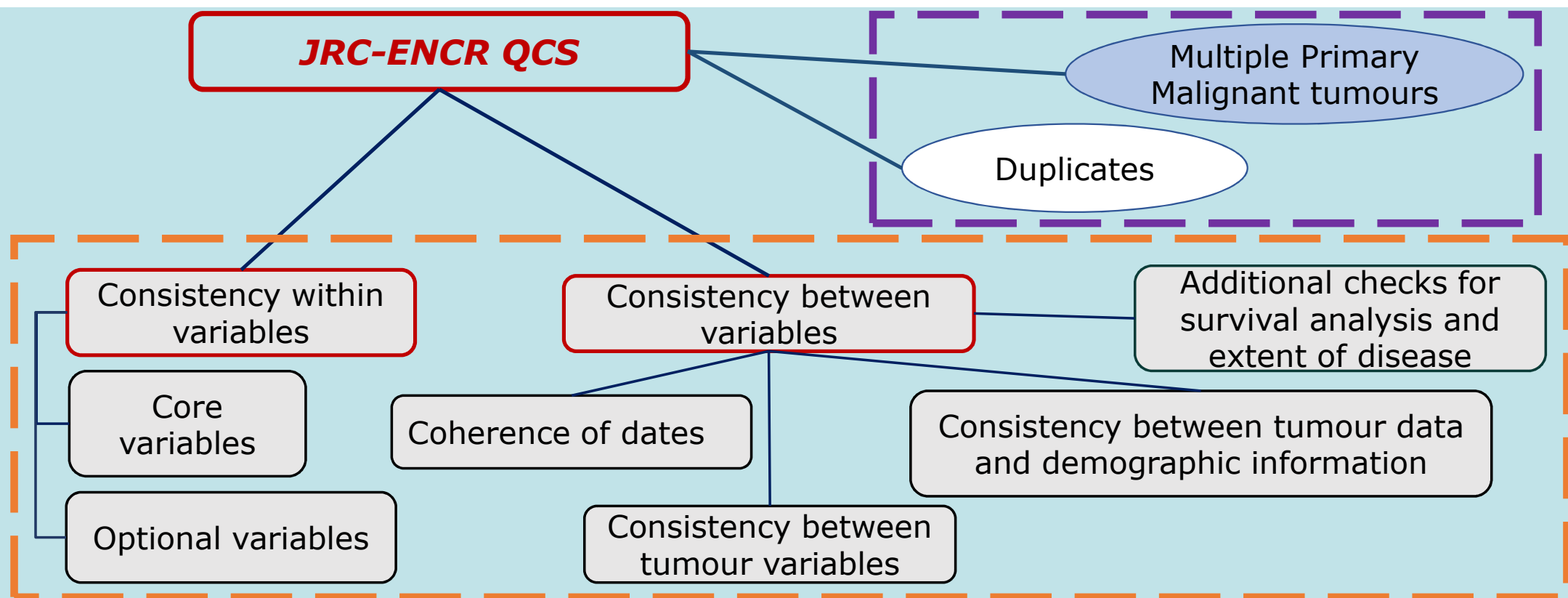
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ENCR-JRC Training on Cancer Registry Data Coding

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JRC-ENCR QCS: interpretation of the output



JRC-ENCR QCS: interpretation of the output

ERRORS (E-)

- ☐ Core/optional variable values (**E-OUTR**)
- ☐ Core/optional variable format (**E-FORM**)
- ☐ Core variable missing values (**E-MISS**)
- ☐ Morphology and behaviour combinations (**E-MOBE**)
- ☐ Coherence between dates (**E-CoDV**) e (**E-CoDA**)
- ☐ Sex and topography combinations (**E-SETO**)

WARNINGS (W-)

- ☐ Age and topography/morphology combinations (**W-AGMT**)
- ☐ Basis of diagnosis and morphology combinations (**W-BDMO** and **W-BDMS**)
- ☐ Basis of diagnosis and morphology/behaviour combinations (**W-BDMU**)
- ☐ Behaviour and TNM combinations (**W-BTNM**)
- ☐ Morphology, behaviour and grade combinations (**W-MOGR**)
- ☐ Morphology and topography combinations (**W-MOTO**)

WARNINGS for Multiple Primary Malignant Tumours

JRC-ENCR QCS: interpretation of the output

Consistency within variables

1. Core and optional variable values according to the 2015 call for data protocol (**E-OUTR**).
2. Core and optional variable format according to the 2015 call for data protocol (**E-FORM**).
3. Core variable missing values (**E-MISS**) and unknown values (**W-UNKN**).
Missing and unknown values are allowed for the optional variables.

JRC-ENCR QCS: interpretation of the output

Consistency within variables

1. Core and optional variable values (**E-OUTR**)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C427	9800	3	2	15/9/1999	15/10/1910	13_Topo	C427	E-OUTR

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C349	8140	3	2	11/4/2002	14/11/1924	27_Cause_death	XXX.9	E-OUTR

JRC-ENCR QCS: interpretation of the output

Consistency within variables

2. Core and optional variable format (**E-FORM**)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C443	80984	3	1	99/99/2012	99/99/9999	14_Morpho	80984	E-FORM

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C349	8000	3	1	12/6/2003	9/1/1933	27_Cause_death	0162.9	E-FORM

JRC-ENCR QCS: interpretation of the output

Consistency within variables

3. Core variable missing values (**E-MISS**)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C187		0	1	99/9/2000	99/11/1927	14_Morpho		E-MISS

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C349	8045	3	1	99/99/2011	99/99/999	12_BoD		E-MISS

JRC-ENCR QCS: interpretation of the output

Consistency within variables

3. Core variable unknown/missing values (**W-UNKN**)/(**E-MISS**)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C323	8480	3	1	99/99/2008	99/99/9999	12_BoD	9	W-UNKN

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C159	8070	3	1	27/3/2009	99/99/9999	5_Month_DoB	99	W-UNKN
							6_Year_DoB	9999	W-UNKN
							11_Age	999	E-MISS

JRC-ENCR QCS: interpretation of the output

Consistency between variables

1. Consistency between dates:

Date of birth and date of incidence (**E-CoDA**)

Date of incidence and date of follow-up (**E-CoDV**)

2. Consistency between demographical information and tumour data:

Sex and topography (**E-SETO**)

Age and topography/morphology (**W-AGMT**)

4. Survival and extent of disease

3. Consistency between tumour variables:

Morphology and behaviour (**E-MOBE**)

Behaviour and TNM (**W-BTNM**)

Basis of diagnosis and morphology/behaviour (**W-BDMU**)

Morphology, behaviour and grade (**W-MOGR**)

Basis of diagnosis and morphology (**W-BDMO** and **W-BDMS**)

Morphology and topography (**W-MOTO**)

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between dates

Consistency between date of birth and date of incidence (E-CoDA)

2_Patient_ID						3_Tumour_ID				
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code	
1	C159	8140	3	2	15/12/1992	30/8/2016	6_Year_DoB	2016	E-CoDA	

Consistency between date of incidence and date of follow-up (E-CoDV)

2_Patient_ID						3_Tumour_ID				
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code	
1	C159	8140	3	2	15/12/1992	30/8/2016	4_Day_DoB	30	E-CoDV	
							5_Month_DoB	8	E-CoDV	
							6_Year_DoB	2016	E-CoDV	
							19_Day_FU	15	E-CoDV	
							20_Month_FU	1	E-CoDV	
							21_Year_FU	1993	E-CoDV	

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between demographical information and tumour data

Consistency between sex and topography (E-SETO)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C569	8000	3	1	99/99/2009	99/99/9999	7_Sex 13_Topo	1 C569	E-SETO E-SETO

Consistency between age and topography/morphology (W-AGMT)

2_Patient_I						3_Tumour_II			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C619	8140	3	1	99/3/2007	29/5/1996	11_Age 13_Topo 14_Morpho	10 C619 8140	W-AGMT W-AGMT W-AGMT

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between morphology and behaviour (E-MOBE)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C421	9950	1	1	20/12/1989	7/3/1921	14_Morpho 15_Beh	9950 1	E-MOBE E-MOBE

Consistency between behaviour and TNM (W-BTNM)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C629	9061	3	1	99/2/2011	99/9/1991	15_Beh 30_pT	3 is	W-BTNM W-BTNM

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between basis of diagnosis and morphology/behaviour (W-BDMU)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C421	9823	3	2	99/5/2013	99/7/1927	14_Morpho 12_BoD	9823 6	W-BDMU W-BDMU

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C187	8210	2	2	99/11/1996	99/11/1922	12_BoD 15_Beh	6 2	W-BDMU W-BDMU

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between morphology, behaviour and grade (W-MOGR)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C569	8620	3	2	27/5/2011	10/7/1954	16_Grade 14_Morpho 15_Beh	5 8620 3	W-MOGR W-MOGR W-MOGR

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C445	9709	3	1	99/5/1998	99/11/1913	16_Grade 14_Morpho 15_Beh	6 9709 3	W-MOGR W-MOGR W-MOGR

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between basis of diagnosis and morphology/behaviour (W-BDMO)

Morphology/behaviour are too specific respect to the basis of diagnosis

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C209	8140	2	2	23/10/2013	28/11/1927	12_BoD 15_Beh	1 2	W-BDMO W-BDMO

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C421	9732	3	1	27/3/1973	1/7/1915	14_Morpho 12_BoD	9732 2	W-BDMO W-BDMO

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between basis of diagnosis and morphology (W-BDMS)

Morphology is not specific enough respect to the basis of diagnosis

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C341	8000	3	2	99/1/1991	99/1/1907	14_Morpho 12_BoD	8000 7	W-BDMS W-BDMS

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C809	8001	3	2	99/5/1990	99/8/1914	14_Morpho 12_BoD	8001 7	W-BDMS W-BDMS

JRC-ENCR QCS: interpretation of the output

Consistency between variables: consistency between tumour variables

Consistency between morphology and topography (W-MOTO)

2_Patient_ID						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
0	C779	8070	3	2	30/12/2008	31/10/1946	14_Morpho 13_Topo	8070 C779	W-MOTO W-MOTO

2_Patient_ID 62731						3_Tumour_ID			
1_Flag	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	Var_Name	Var_Value	Error_Code
1	C809	9823	3	1	30/10/2003	29/5/1944	14_Morpho 13_Topo	9823 C809	W-MOTO W-MOTO

JRC-ENCR QCS: interpretation of the output

Consistency between records: Multiple Primary Malignant tumours (MPMT)

1. The 2004 International rules for multiple primary cancers have been implemented in the JRC-ENCR QCS, taking into account the criteria for reporting/ analysis.
2. The objective is to identify tumours which were registered as MPMT and they could be the same tumour.
3. Example: 2 breast tumours with the same morphology are considered the same tumour for incidence estimation, independently of the laterality. Nevertheless, if the laterality is different, both tumours should be registered.



JRC TECHNICAL REPORTS

A proposal on cancer data quality checks:
**one common procedure
for European cancer registries**

European Network of Cancer Registries
2010

4 Quality Checklist for Multiple Primary Malignant Tumours

The quality checklist of warnings for Multiple Primary Malignant (MPMTs) was developed by the JRC according to the current International Rules for Multiple Primary Cancers published in 2004 (http://www.encr.eu/images/docs/recommendations/MPrules_july2004.pdf).

This checklist has been addressed by the JRC at a later stage than for version 1.0 of this report, and is therefore included in the current version 1.1 to clarify the checks and the warning messages given by the JRC-ENCR Cancer Registries Data Quality Check Software.

The steps for checking solid MPMTs are the following:

Step 1. The two topographies are compared according to the current International Rules for Multiple Malignant Cancers published in 2004.

In addition to the groups of topography codes considered as a single site in table 1 of the 2004 international rules, **for checking** other groups are considered as a single topography (see *Table 9*).

C80 (unknown primary site) and C768 (overlapping lesion of ill-defined sites) are considered as a single site with any topography.

Topography code	Definition
C00	Lip
C03	Gum
C04	Floor of mouth
C05	Palate
C06	Other and unspecified parts of mouth
C760	Head, face or neck, NOS

JRC-ENCR QCS: interpretation of the output

Checks between records: Multiple Primary Malignant Tumours

2_Patient_ID	B					3_Tumour_ID	a		
12_BoD	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	18_Vital_Status	23_Laterality	
7	C619	8140	3	1	10/1/2008	27/6/1929	2	9	
2_Patient_ID	B					3_Tumour_ID	b		
12_BoD	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	18_Vital_Status	23_Laterality	
7	C809	8010	3	1	30/4/2008	27/6/1929	2	9	

JRC-ENCR QCS: interpretation of the output

Checks between records: Multiple Primary Malignant Tumours

2_Patient_ID						3_Tumour_ID		
A						1		
12_BoD	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	18_Vital_Status	23_Laterality
7	C509	8520	3	2	12/7/2004	27/5/1933	2	2

2_Patient_ID						3_Tumour_ID		
A						2		
12_BoD	13_Topo	14_Morpho	15_Beh	7_Sex	DoI	DoB	18_Vital_Status	23_Laterality
7	C509	8520	3	2	12/7/2004	27/5/1933	2	1



**ENCR-JRC Training on Cancer
Registry Data Coding**

JRC Ispra, 5-6 June 2019

Thank you

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<https://www.encr.eu/>