11th International Colorectal Forum
24-26 January 2010 – Verbier Switzerland
icf INTERNATIONAL COLORECTAL FORUM

Verbier 24 January 2010
Marc-Claude Marti Lecture

PROCARE
PROJECT ON CANCER OF THE RECTUM

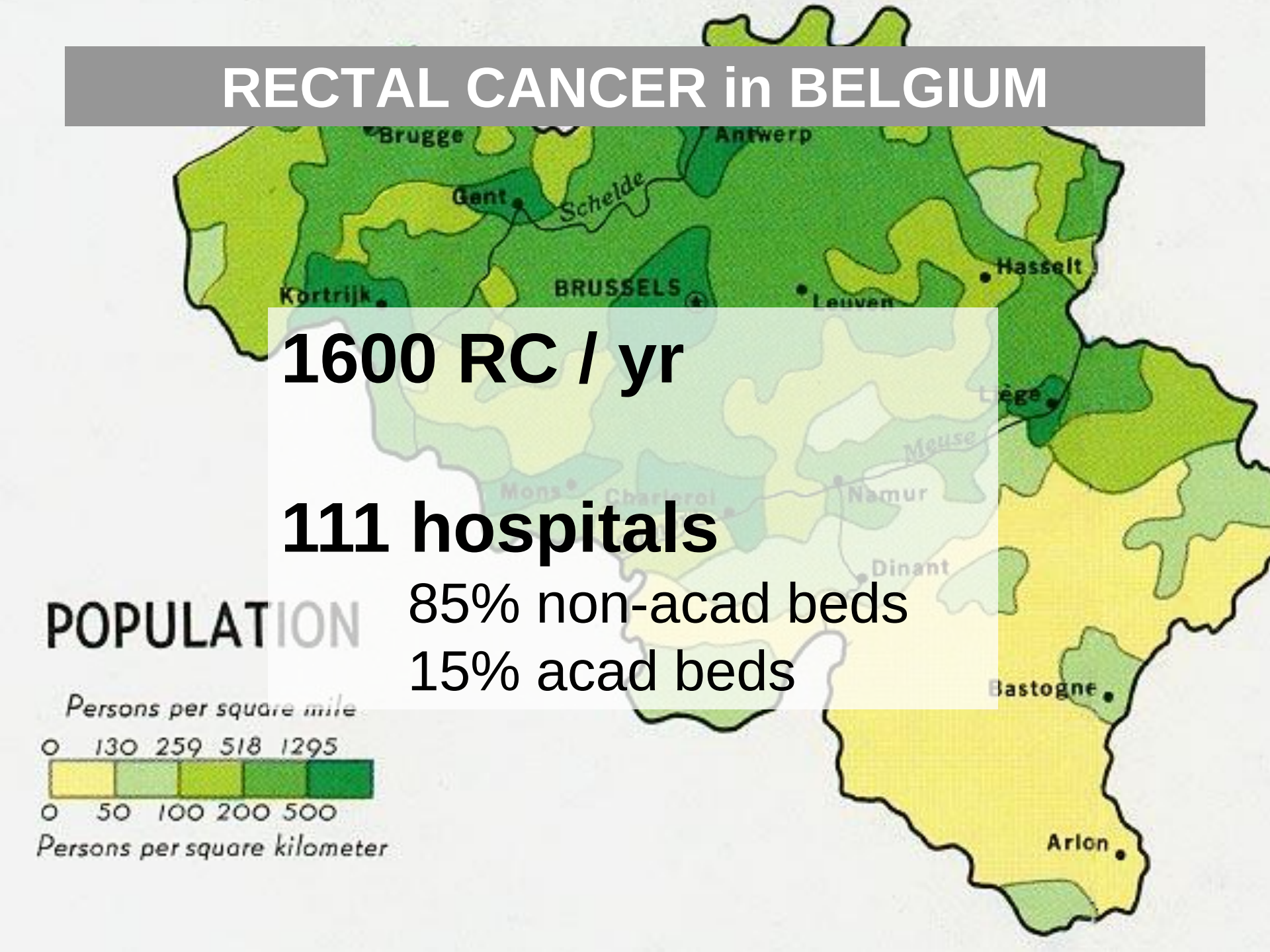
The Belgian national rectal cancer project

Rien de grand ne se fait sans passion … assortie de quelques qualités purement humaines

- serenity
- wisdom, knowledge, contacts
- visionary (amb. procto, ECCP 1984, …)
- kind
- patient
- humour


«KOE-KOEK»
zaza

RECTAL CANCER in BELGIUM



1600 RC / yr

111 hospitals

85% non-acad beds

15% acad beds

Public Health in Belgium

Authorities

↓

mutualities (insurer)
very limited control

Physicians

independent > employee
high N, <u>competition</u>

Public

<u>Mandatory</u> health insurance
<u>Free</u> choice
Reimbursement

Med – Mut consensus

annual

PROCARE

PROJECT ON CANCER OF THE RECTUM

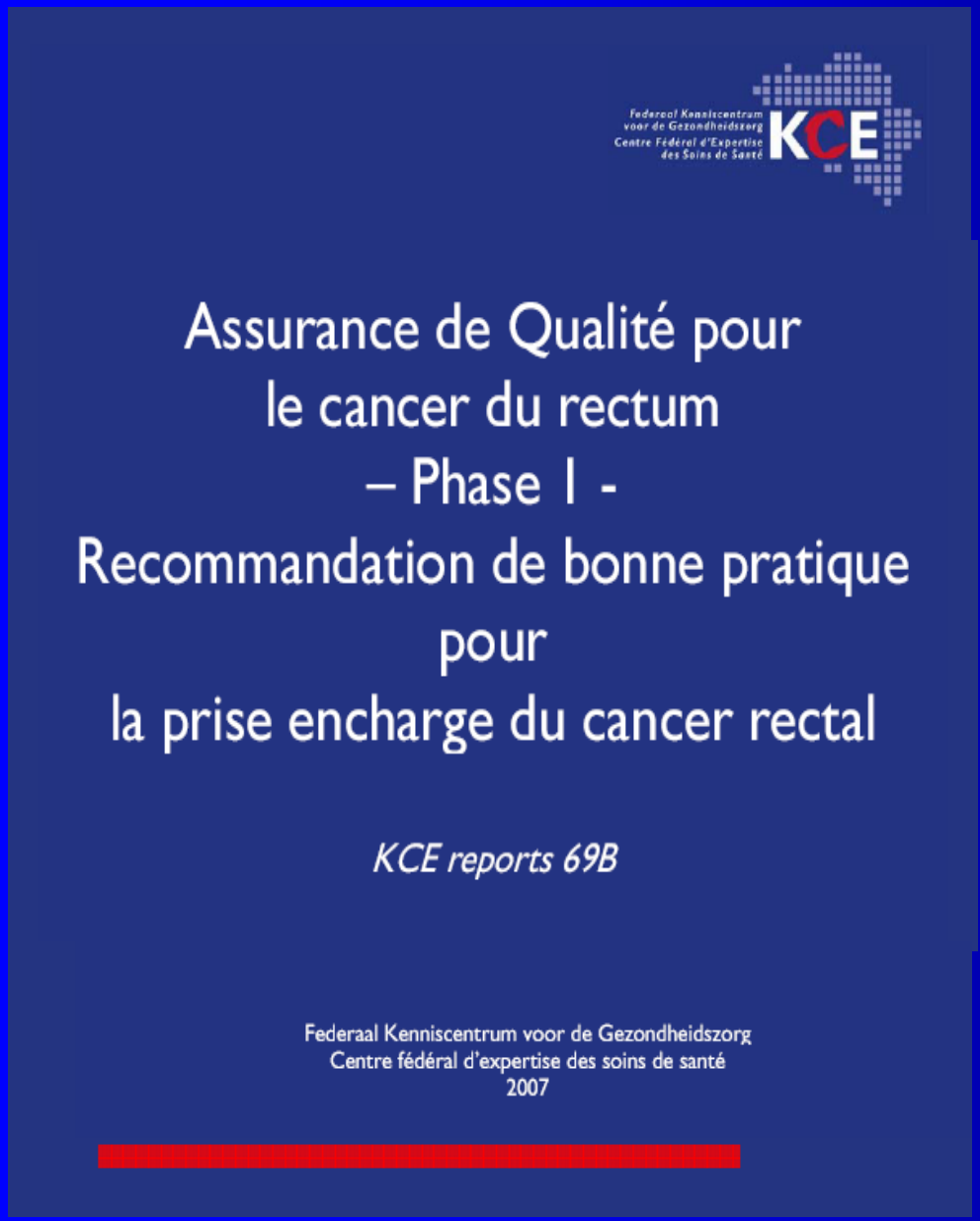
improve outcome & reduce variability

for <u>all</u> aspects and stages of RC

- **Multidisciplinary (teams)**
- **Profession-driven, all centers/teams**
- **Voluntary participation**
- **Educational (confidentiality)**

PROCARE METHODS

- multidisc. EB **Guidelines and QCI** (2005, 07, 08)
- quality assurance (**implementation** of GL)
  - training (radiology, RT, TME, pathology)
  - registration of 151 items (>1/2006)
  - feedback / benchmarking (2008, 2009)



Kwaliteit van rectale kankerzorg – Fase 2: ontwikkeling en test van een set van kwaliteitsindicatoren

KCE reports 81A


BELGIAN
CANCER
REGISTRY
NL - FR - D - ENG
Home
Het Kankerregister
Statistieken
Registratie
Bijscholing
PROCARE
Contact
Presentation
Working
Statistics
Publications
Archives
Links
Online applicaties
Vacatures
Contact
www.kankerregister.org
www.registreducancer.org
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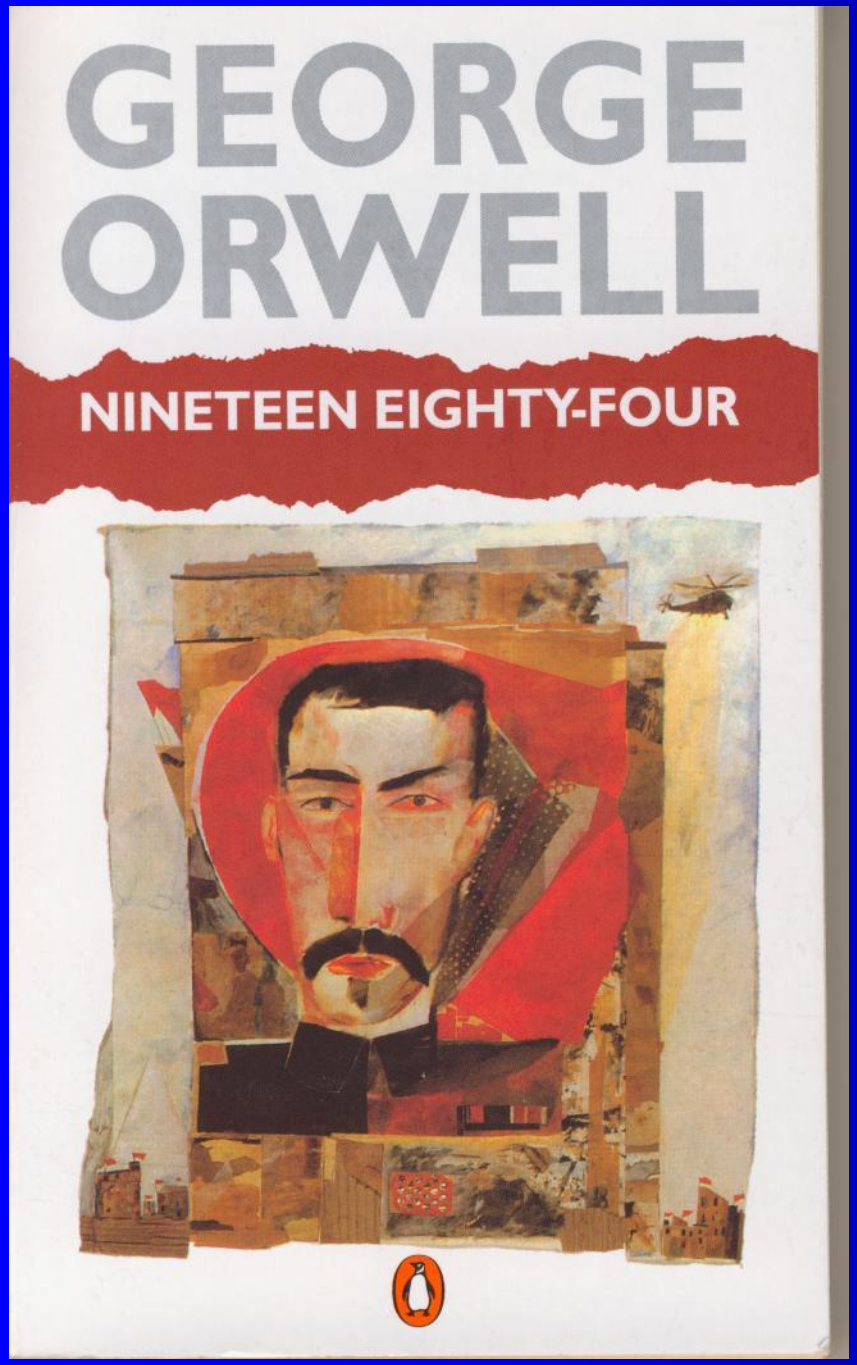
website presents det
ever since. You can al
If you are interested
under the heading "St
The working of the p
entry forms and the T
Latest news

Quality of Care Indicators : 40
PROCARE vs. ADMINISTRATIVE DATABASES

	PROCARE	ADMIN
General (level 1)	3	2
Diagnosis and staging	7	2
Neoadjuvant treatment	7	1
Surgery	6	3
Pathology	6	0
Adjuvant treatment	5	0
Follow-up	3	0
Palliative treatment	2	1
	39	**9**

Big Brother is watching you



FUNDING
for
training and
central data registration

Belgian Federation against Cancer (2006)

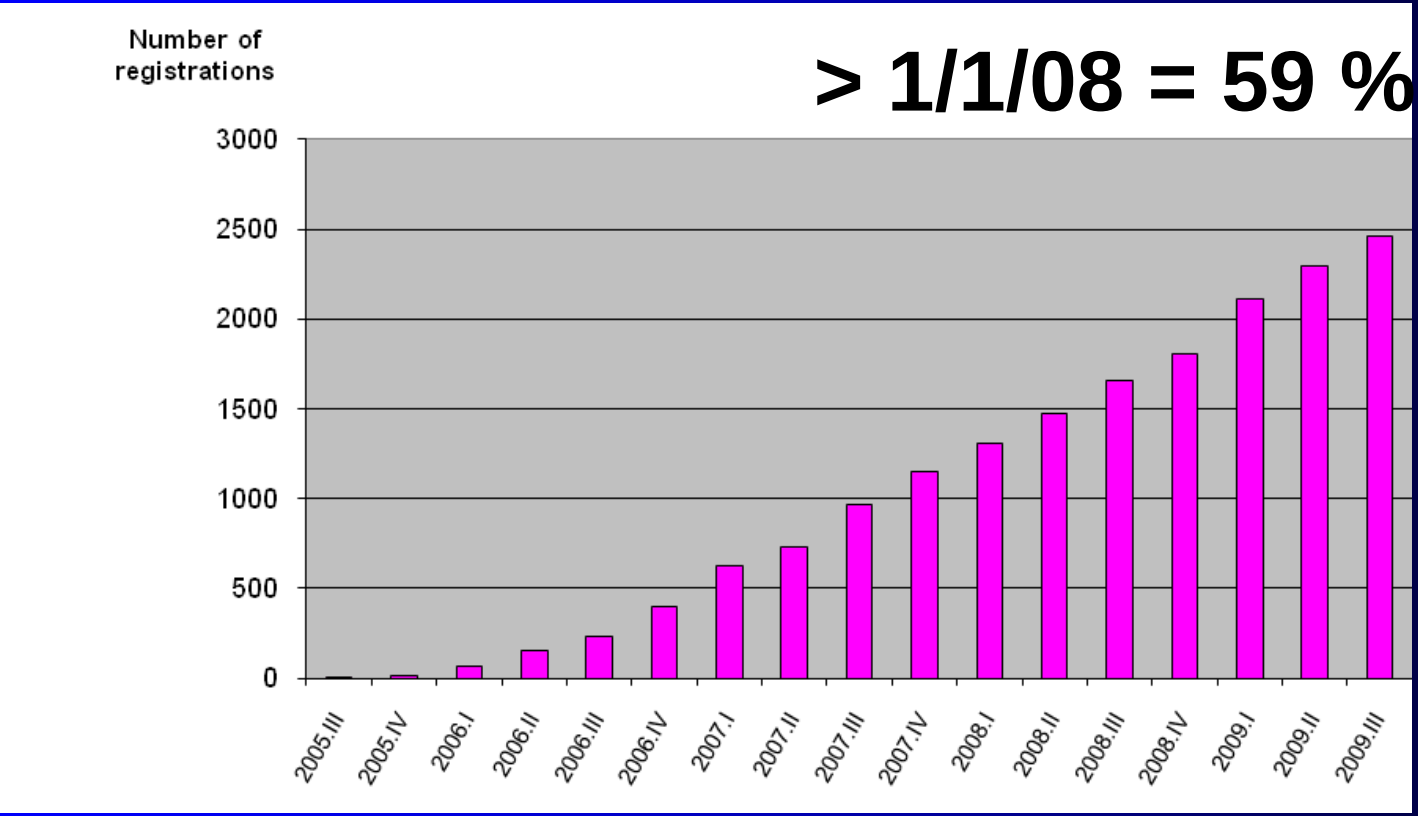
KCE

RIZIV / INAMI (2007 – 2012)

TRAINING

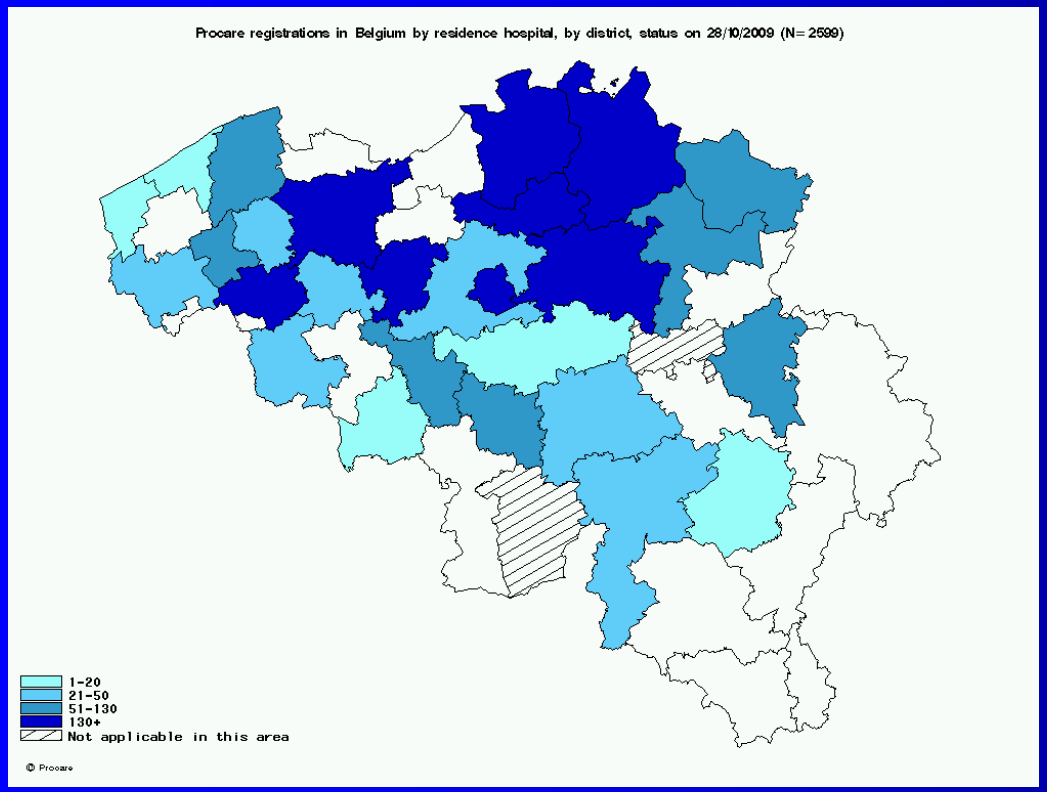
- **PRETREATMENT STAGING (radiologists)**
  - central review CT / MRI images 2010
- *RADIOTHERAPY*
- **TME** : 177 / 225 surgeons interested (2005)
  - 43 candidate-trainers → 25 trainers (18 NL / 7 FR)
  - 6 trained (since 8/2008)
- **PATHOLOGY**
  - TME reviews from candidate trainers
  - > 11/2009 TME review ad random (44% correct material)

2947 patients registered (Dec 4 2009)

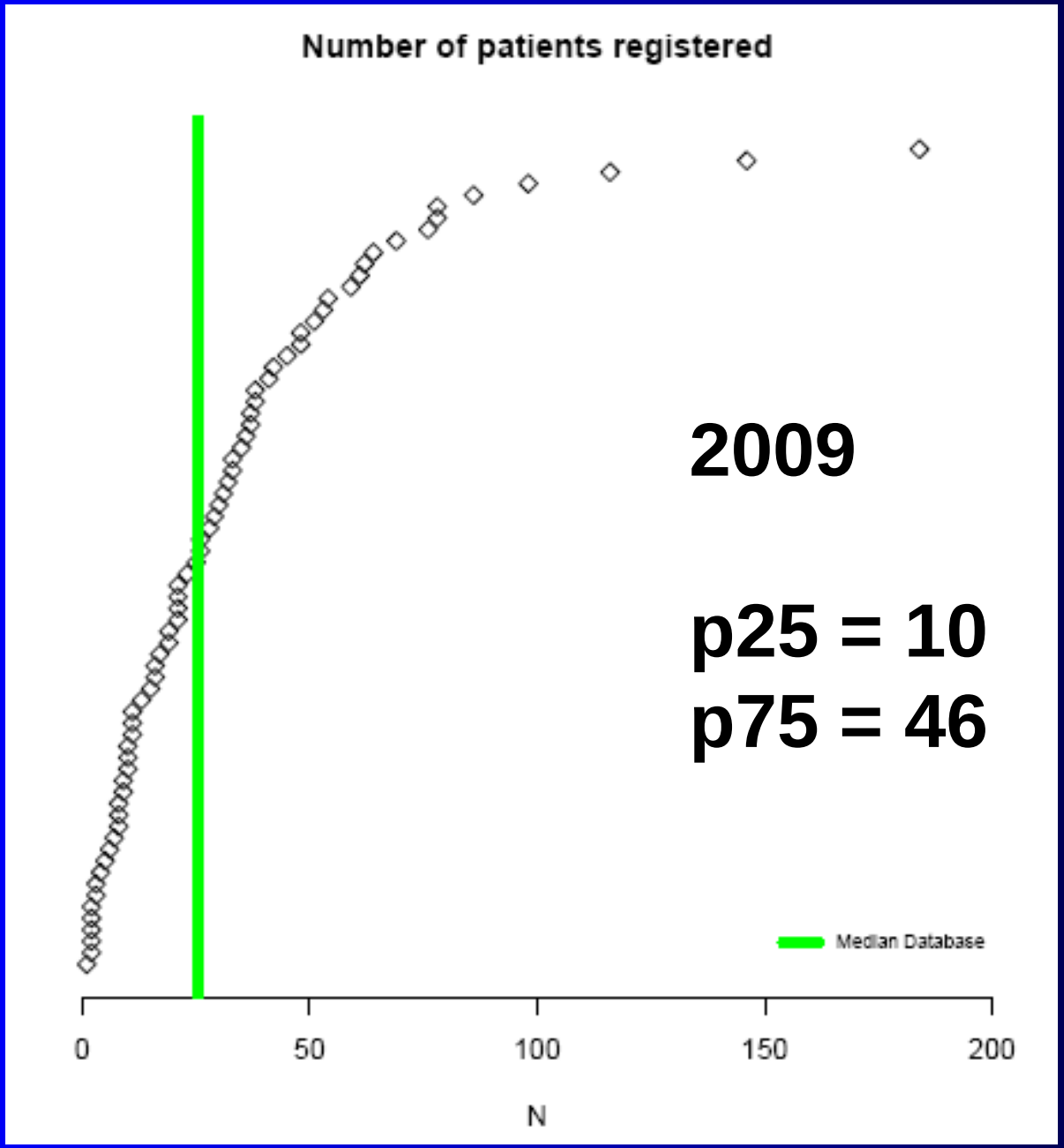


Who submitted patients ?

70 / 111 = 63 % hospitals



West Vlaanderen	12/14
Oost Vlaanderen	7/14
Antwerpen	19/19
Limburg	6/ 8
Vlaams Brabant	4/ 6
Brussel/Bruxelles	9/14
Brabant Wallon	1/ 2
Hainaut	7/16
Namur	2/ 6
Liège	2/11
Luxembourg	1/ 3


Number of patients registered
2009
p25 = 10
p75 = 46
Median Database
0
50
100
150
200
N

How to stimulate participation?

NON-PARTICIPATING HOSPITALS

letter to directors, surgeons (Oct 16 2009)

15/41 will participate (Nov 3 2009)

2 submitted patients (Nov 3 2009)

PARTICIPATING HOSPITALS

reminder incl. training (Nov 2009)

list op participating hospitals on website

newsletters, feedback

Analysis for second feedback

N patients	2439
Male/Female (%)	61/39
Age (mean yrs)	68
Lower level of tumour	
High (>10 cm)	17.7%
Mid (>5 - ≤ 10 cm)	38.4%
Low (≤ 5 cm)	43.9%

PME 15.8 %

TME 83.4 %

Pretreatment diagnosis and staging (1)

Complete large bowel examination if elective	**98.2%**
Use of CT (any stage)	57.4%
Use of TRUS (any stage)	42.4%
Use of TRUS if cT1-2	45.3%
Use of MRI (any stage)	37.8%
Use of MRI if cT3-4	43.5%
TRUS + CT and/or MRI	**31%**
cCRM if stage II-III	27.3%
CEA before treament	**82.6%**

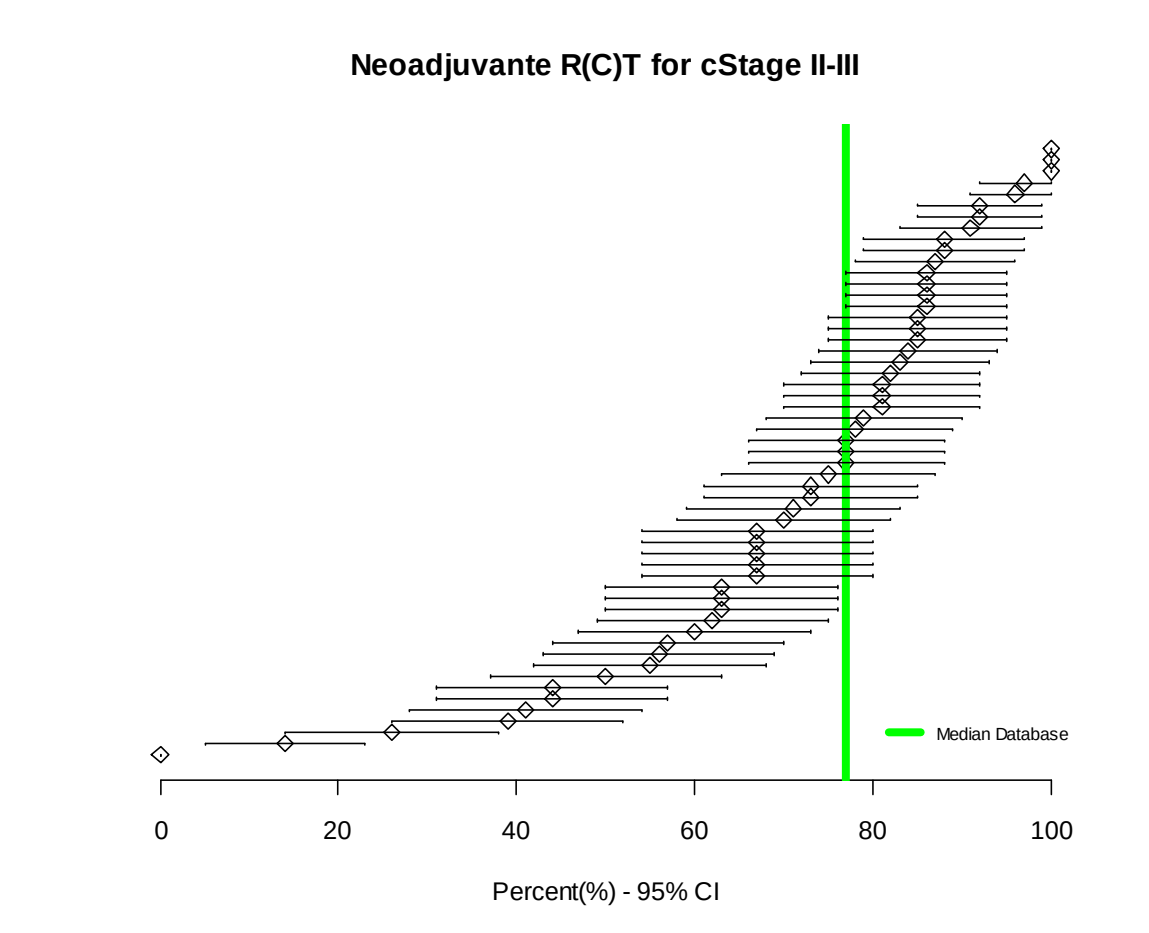
Pretreatment diagnosis and staging (2)

cStages	
cStage 0	0.5%
cStage I	13.6%
cStage II	18.3%
cStage III	50.4%
cStage IV	14.3%
cStage X	2.9%
cStage missing	**306 = 12.5%**

Neoadjuvant treatment

Short course for cStage II-III	**9.9 %**
Long course for cStage II-III	**63.4 %**
RT for high cStage II-III	39.8 %
RT for mid cStage II-III	78.1 %
RT for low cStage II-III	86.2 %
Long course if cCRM $\leq$ 2 mm	69.8 %
Surgery 6-8 wks after long course	**61.3 %**
Surgery 4-12 wks after long course	**97.4 %**

Neoadjuvant (chemo)radiotherapy for cStage II or III (if > 10 pts)



Neoadjuvant treatment

	N your hospital	%your hospital	N Procare	%procare	p25	median	p75
QCI: Short course RT for cStage II-III	3	2.5	118	9.9	0	0	7.1
QCI: Long course (C)RT for cStage II-III	104	87.4	758	63.4	50	64.3	83.3
QCI: Long course (C)RT without interruption	103	99	744	98.2	100	100	100
NEOADJUVANT TREATMENT FOR cSTAGE II-III							
-> For high RC	11	64.7	80	39.8	0	33.3	66.7
-> For mid RC	40	95.2	421	78.1	60	80.5	100
-> For low RC	68	97.1	551	86.2	71.4	92.6	100
Long course (C)RT if cCRM <= 2mm	59	79.7	164	69.8	0	87.5	100

Surgery (1)

Elective/scheduled	98.1 %
Open radical resection	71.5 %
Lap radical resection	24.9 %
Lap-converted rad resection	3.6 %
R0 after radical resection	**75.7 %**
R1 after radical resection	**10.4 %**
R2 after radical resection	13.9 %
Rectal perforation	**7.7 %**

Surgery (2)
Type of resection and reconstruction

Local excision/TEM	1.3 %	28
APER/Hartmann	**22.2 %**	**470**
AR + CRA	21.5 %	454
TME + CAA	54.3 %	1148
Other types of resection	0.5 %	11
	100 %	2111
Missing data	6.4 %	145

Unacceptable variation in abdominoperineal excision rates for rectal cancer: time to intervene?

E Morris, P Quirke, J D Thomas, et al.

Gut 2008 57: 1690-1697 originally published online June 5, 2008

Rectal cancer surgery: is restoration of intestinal continuity the primary aim?

C R Selvasekar, G David, D J Corless, et al.

Gut 2009 58: 311

Statistics, damned statistics and time to intervene

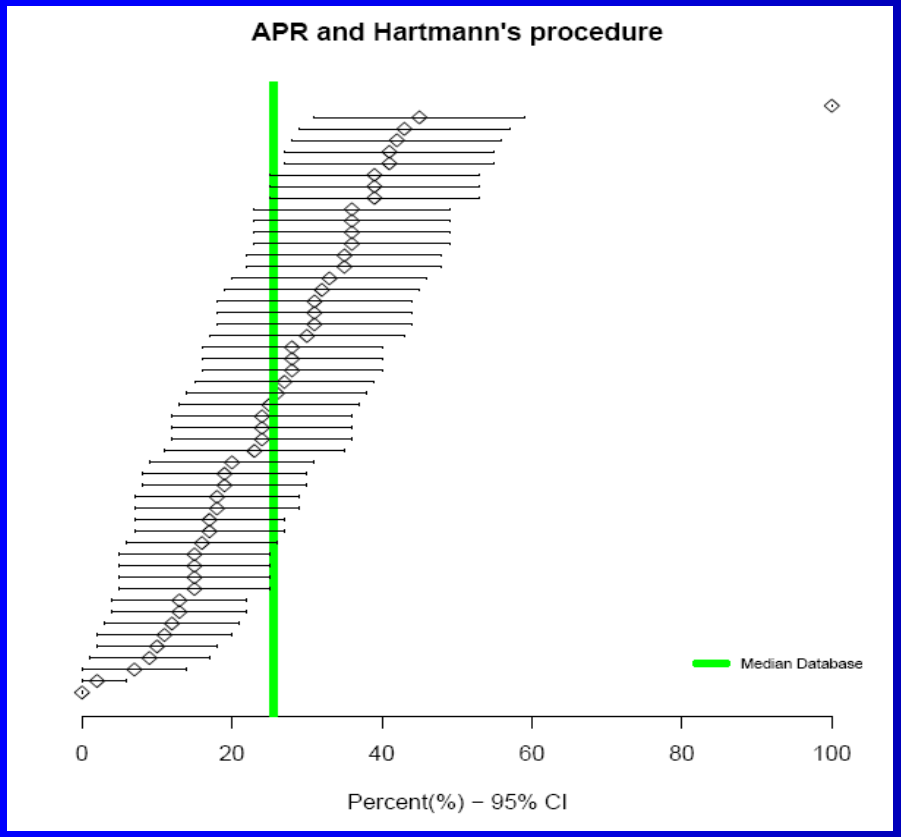
N A Scott, P Sagar and and the 30 co-signatories listed below

We question the underlying agenda of this type of publication. It is our collective view that incomplete data, naive reasoning and flawed conclusions neither represent good science nor promote and protect the health of patients.

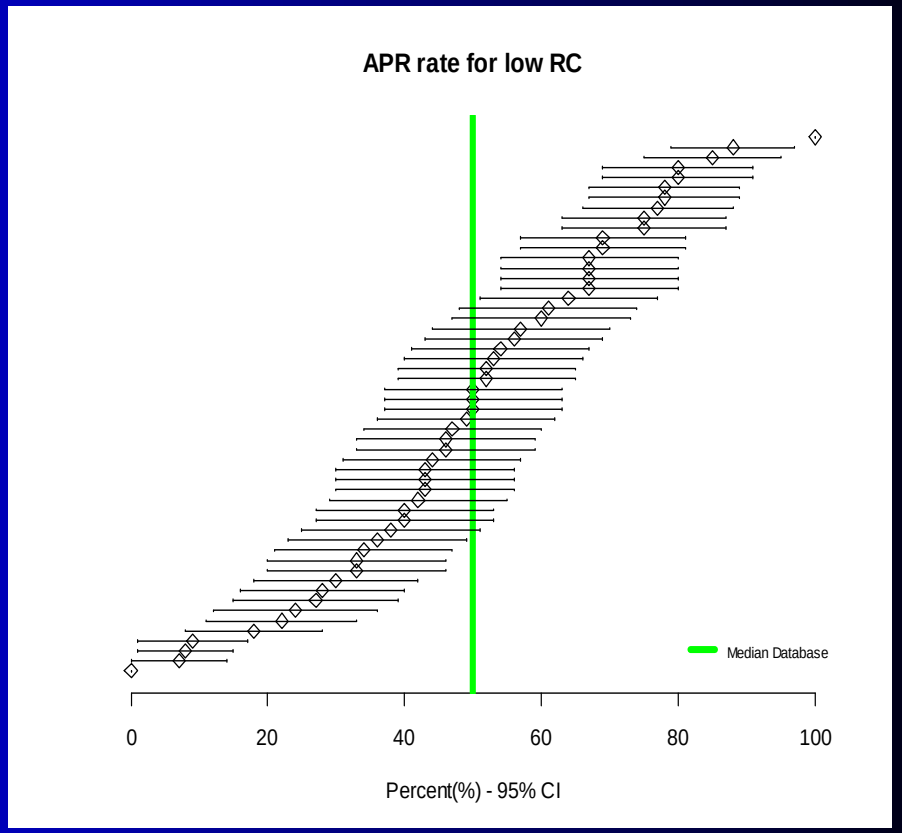
quality. In addition, inferring surgical excellence from low APE rates without adjusting for factors such as tumour height and stage may lead to inappropriate conclusions. Despite considerable efforts by Morris *et al*, this work was unable to adjust these data fully for such confounding factors, demonstrating that the necessary infrastructure to achieve this is not currently available in the UK at the national level. Therefore, APE rates in isolation are unlikely to be a useful benchmark to audit surgical performance at present.

APR and Hartmann (2009)

0 – 15 cm

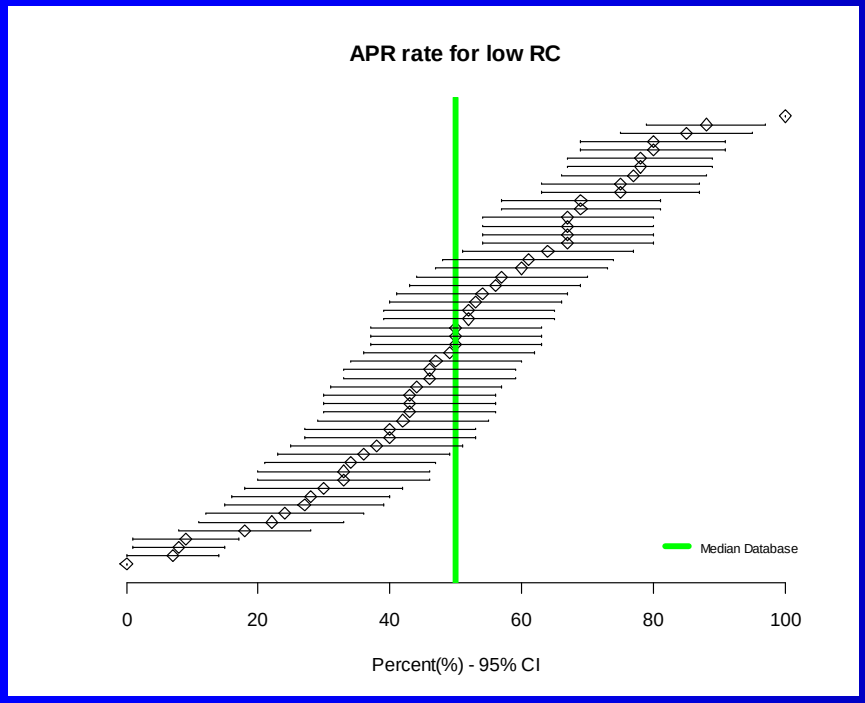


0 – 5 cm

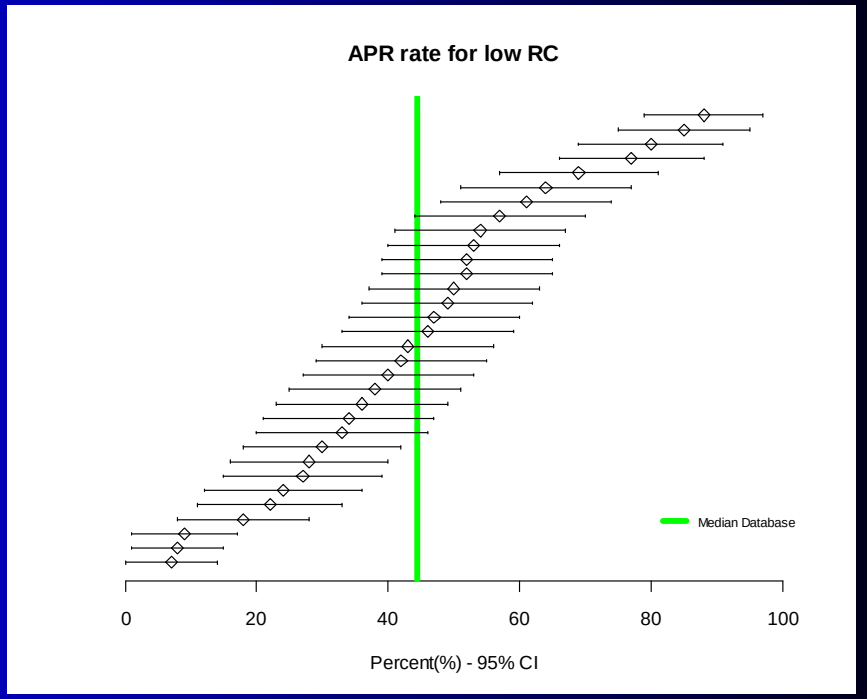


APR and Hartmann (2009) for rectal cancer at 0 – 5 cm

Teams > 10

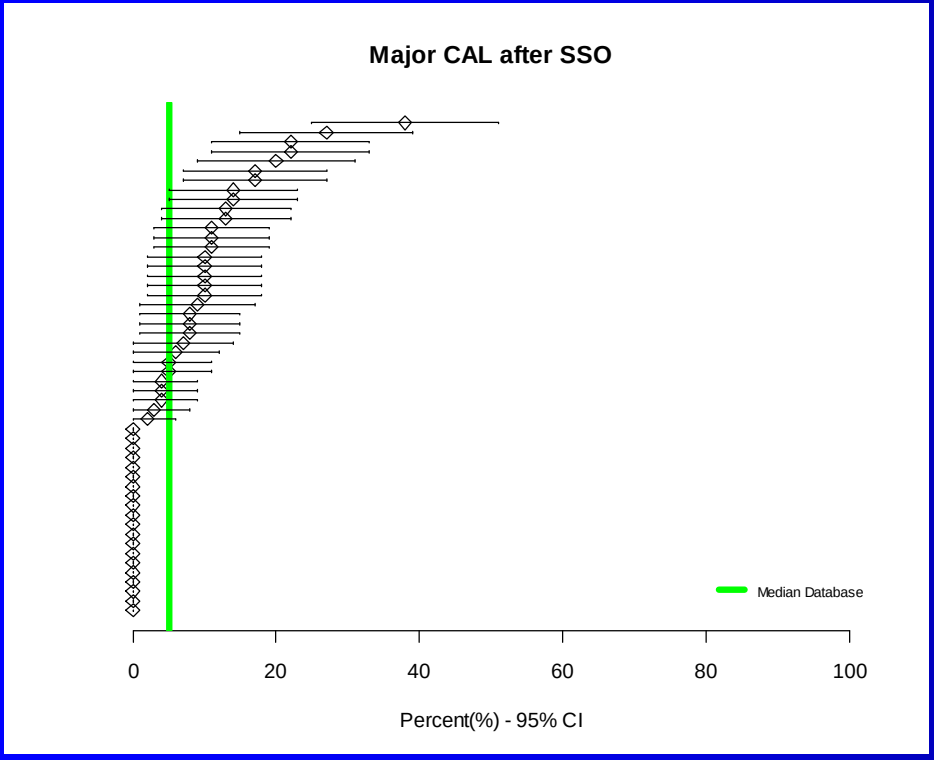


Teams > 30

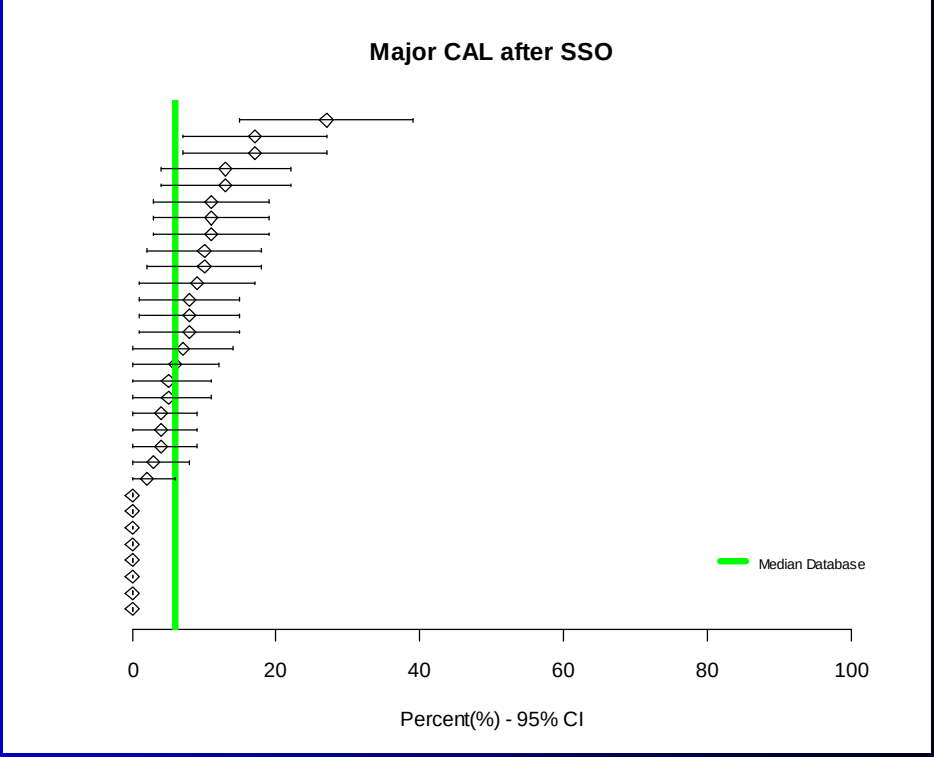


Major leak after SSO with/without DS

> 10



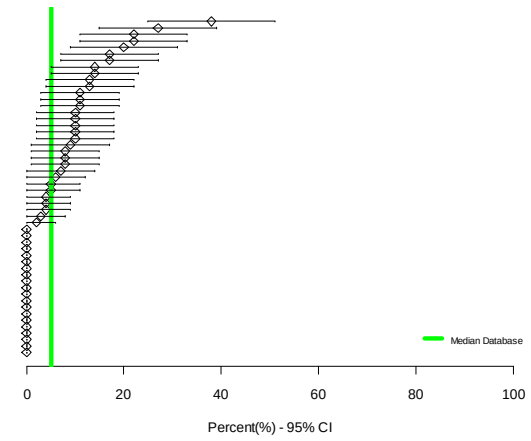
> 30



Major leak after SSO (if > 10 pts)

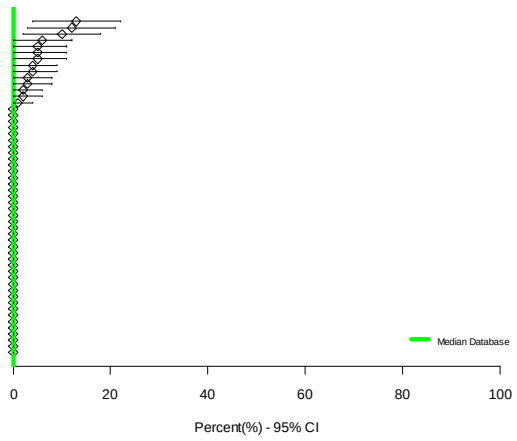
64 %

no DS



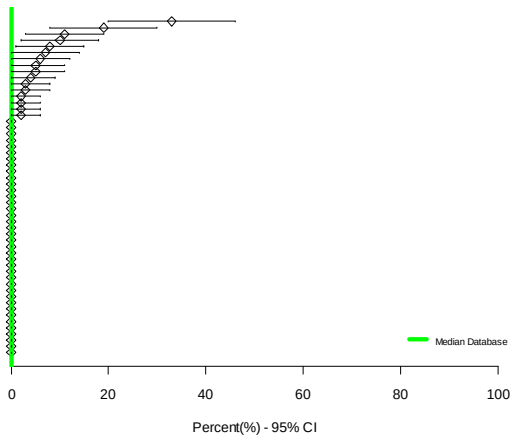
9.5 % leak

selective DS



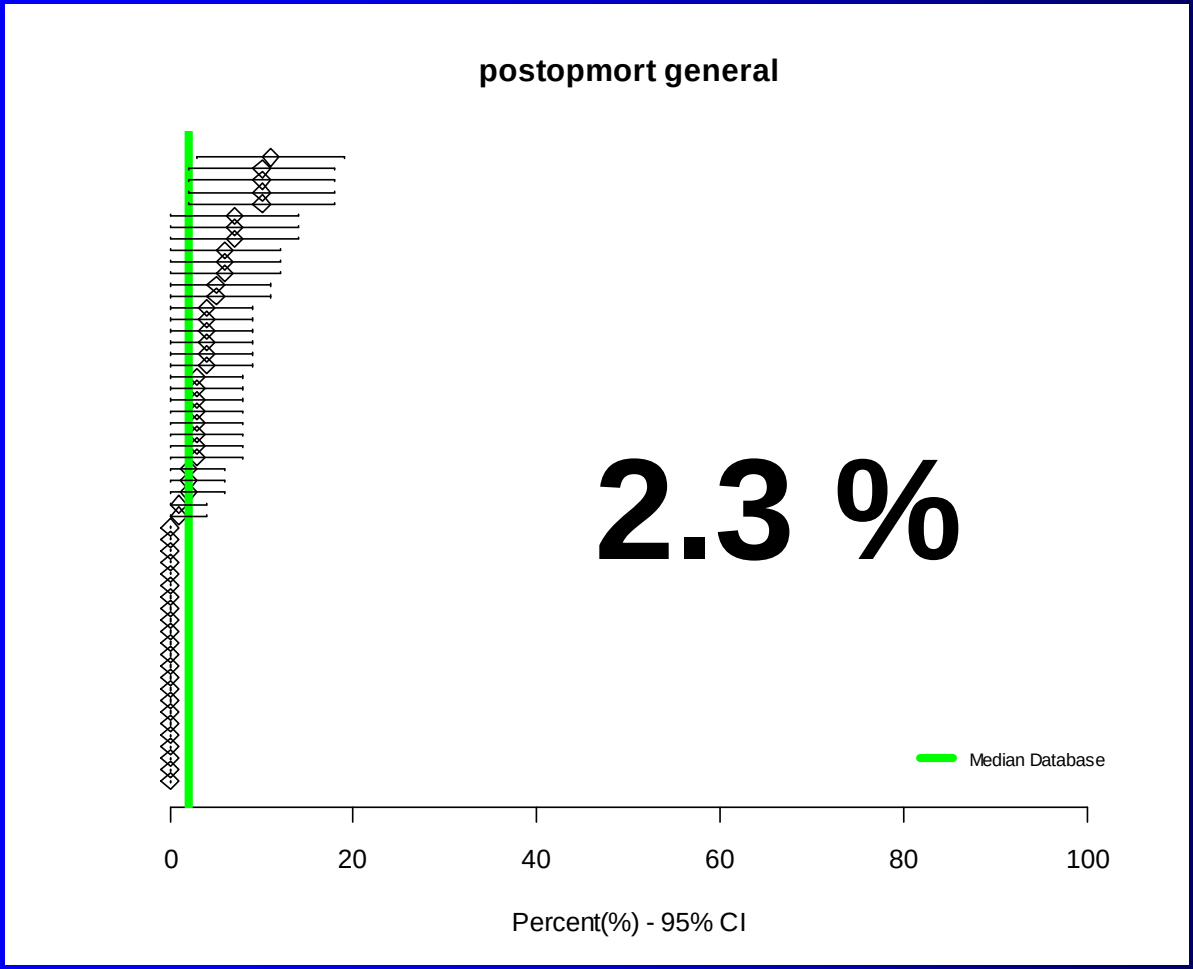
36 %

routine DS



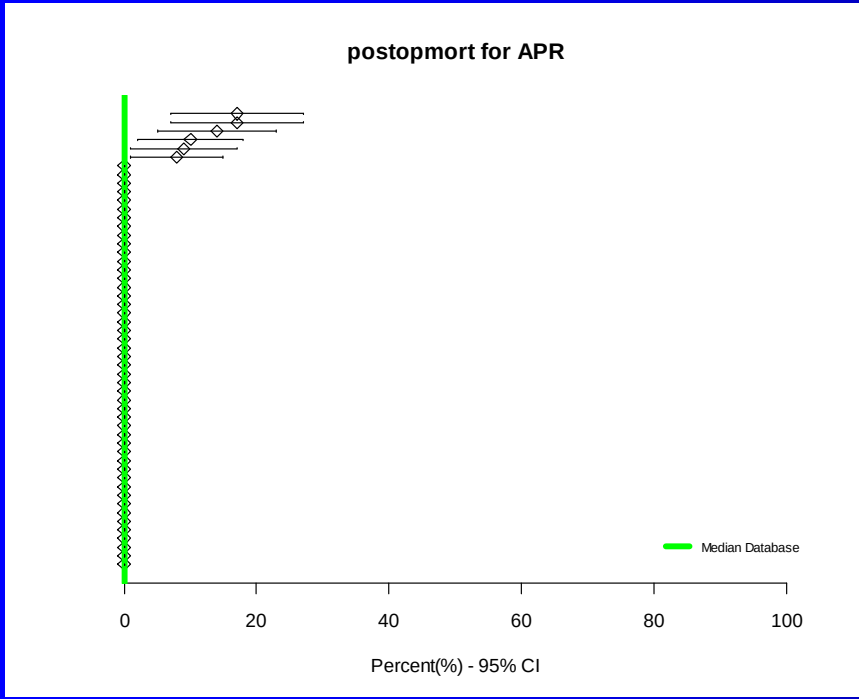
5.5 % leak

In hospital mortality after elective radical resection (if > 10 pts)

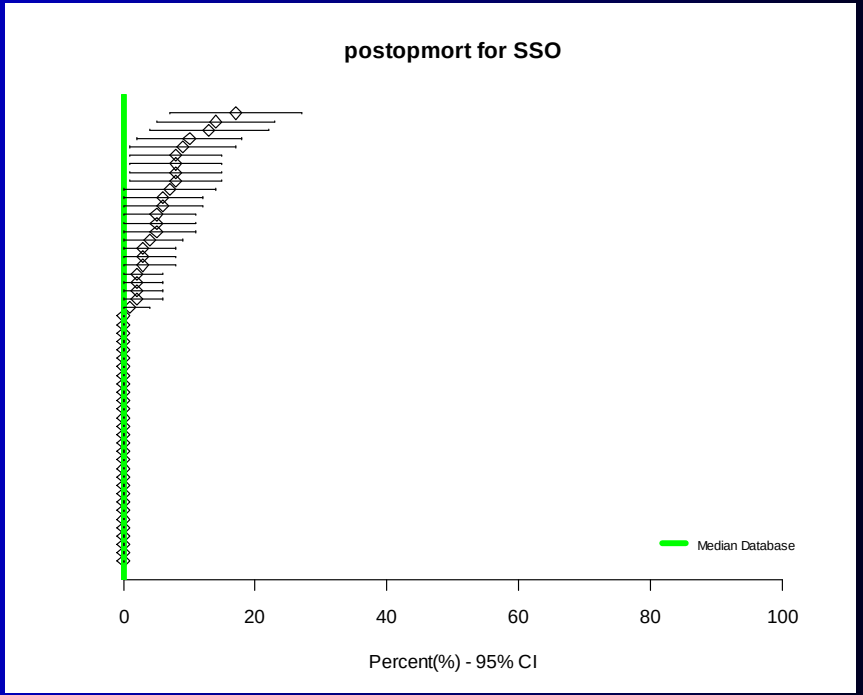


In hospital mortality after elective radical resection (if > 10 pts)

after APR



after SSO

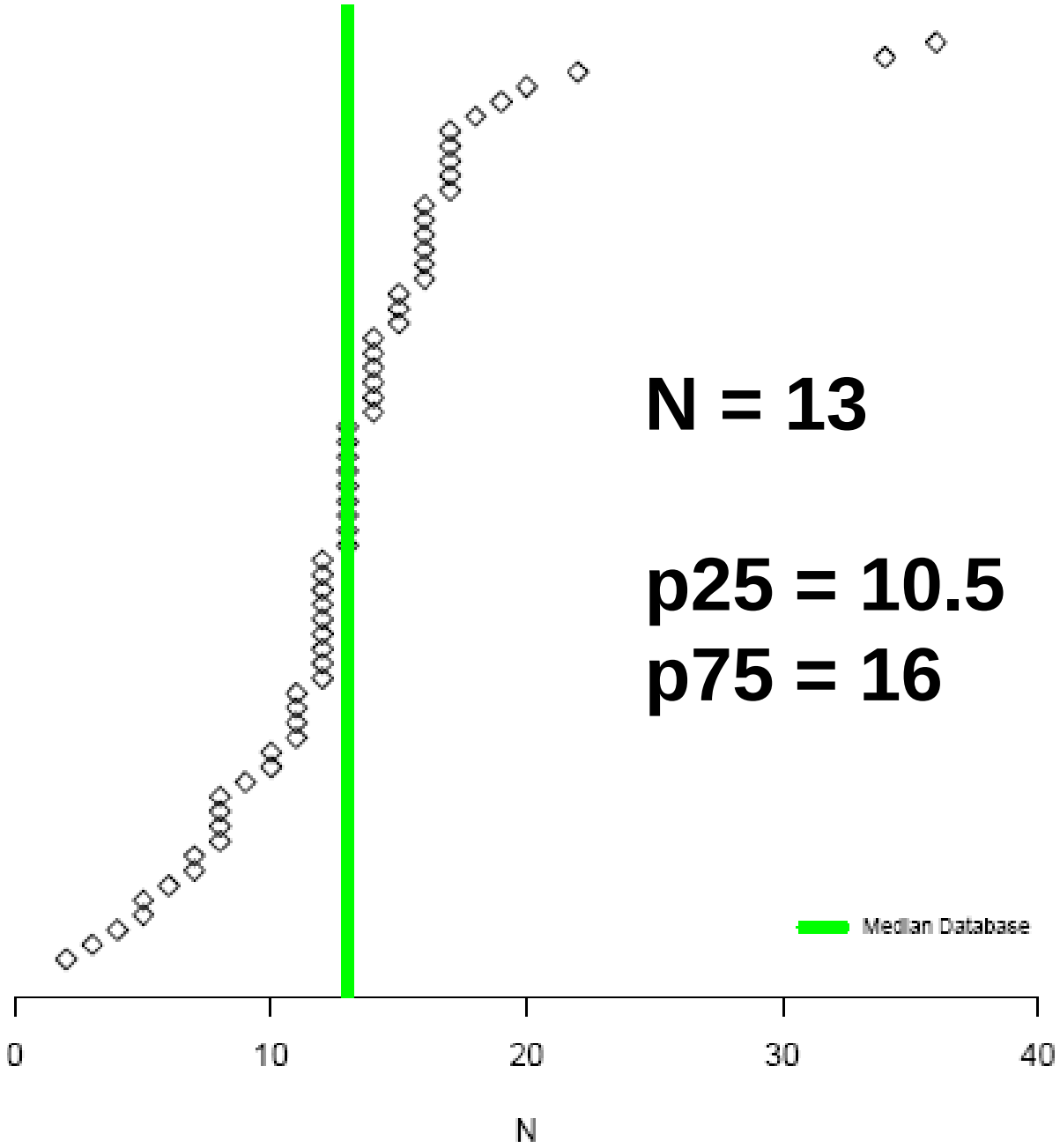


	1	2	3
ASA 1	19	**55**	5
ASA 2	67	38	47
ASA 3	14	7	**48**
In hosp mortality	0.6	1.8	0

Pathology (1)

Report sheet used	90.9 %
Quality of TME reported	59.2 %
(y)pCRM reported	71.4 %
Distal margin status reported if low	95.3 %
Dworak regression grade reported after long course RT	70.8 %

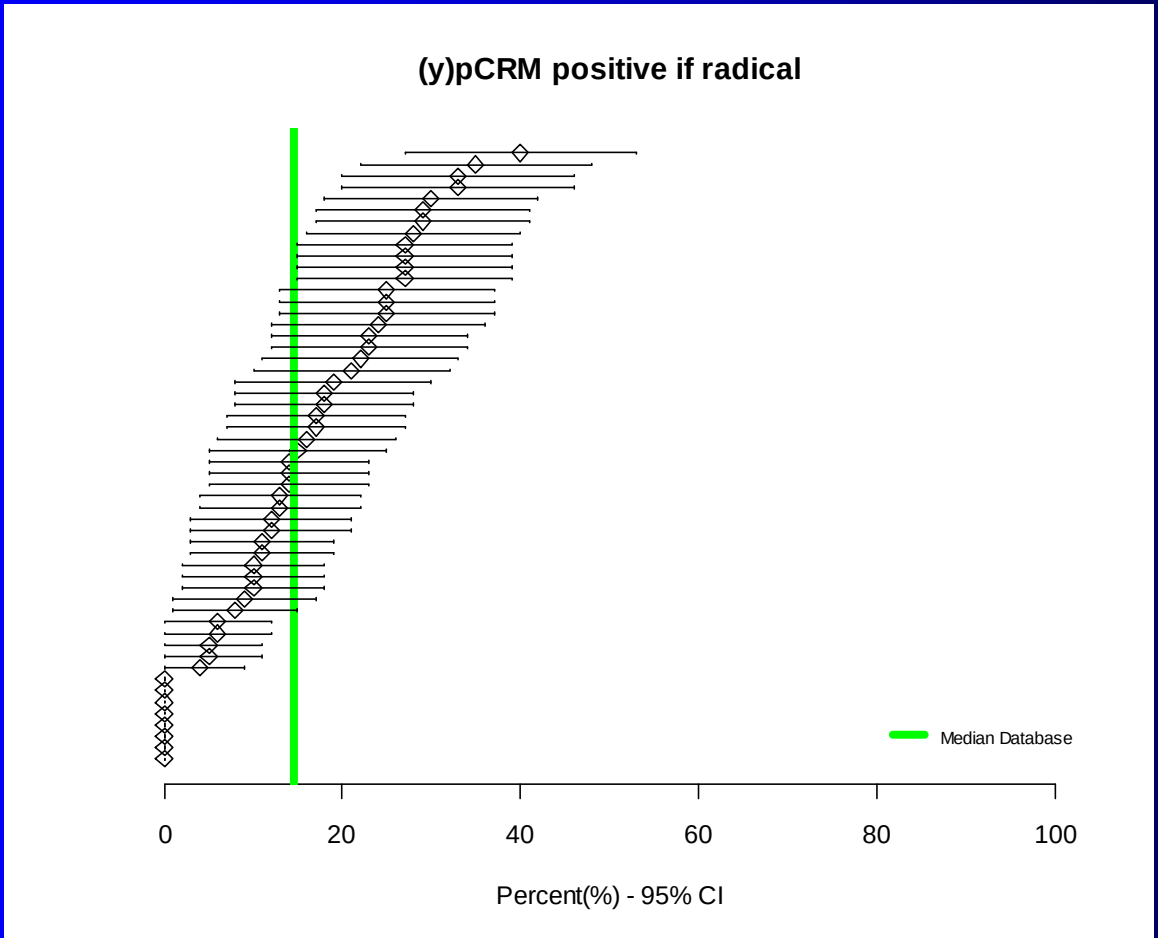
Median number of lymph nodes exam in no or short course neoadj RT



Pathology (2)

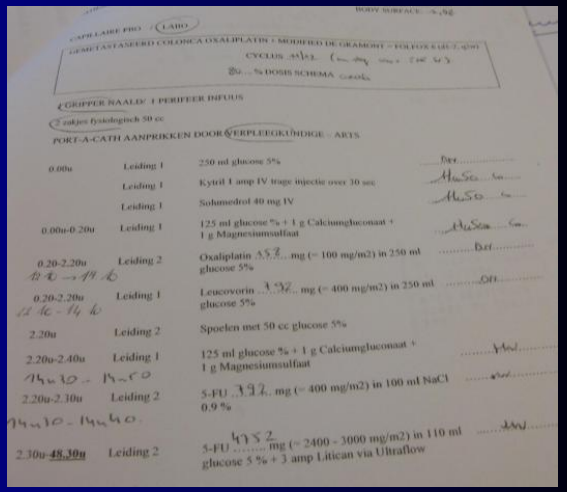
Quality of TME poor	10.9 %
(y)pCRM ≤ 1 mm if radical resection	16.6 %
Distal margin invaded if SSO for low	2.4 %

Positive (y)pCRM after elective radical resection (if > 10 pts)

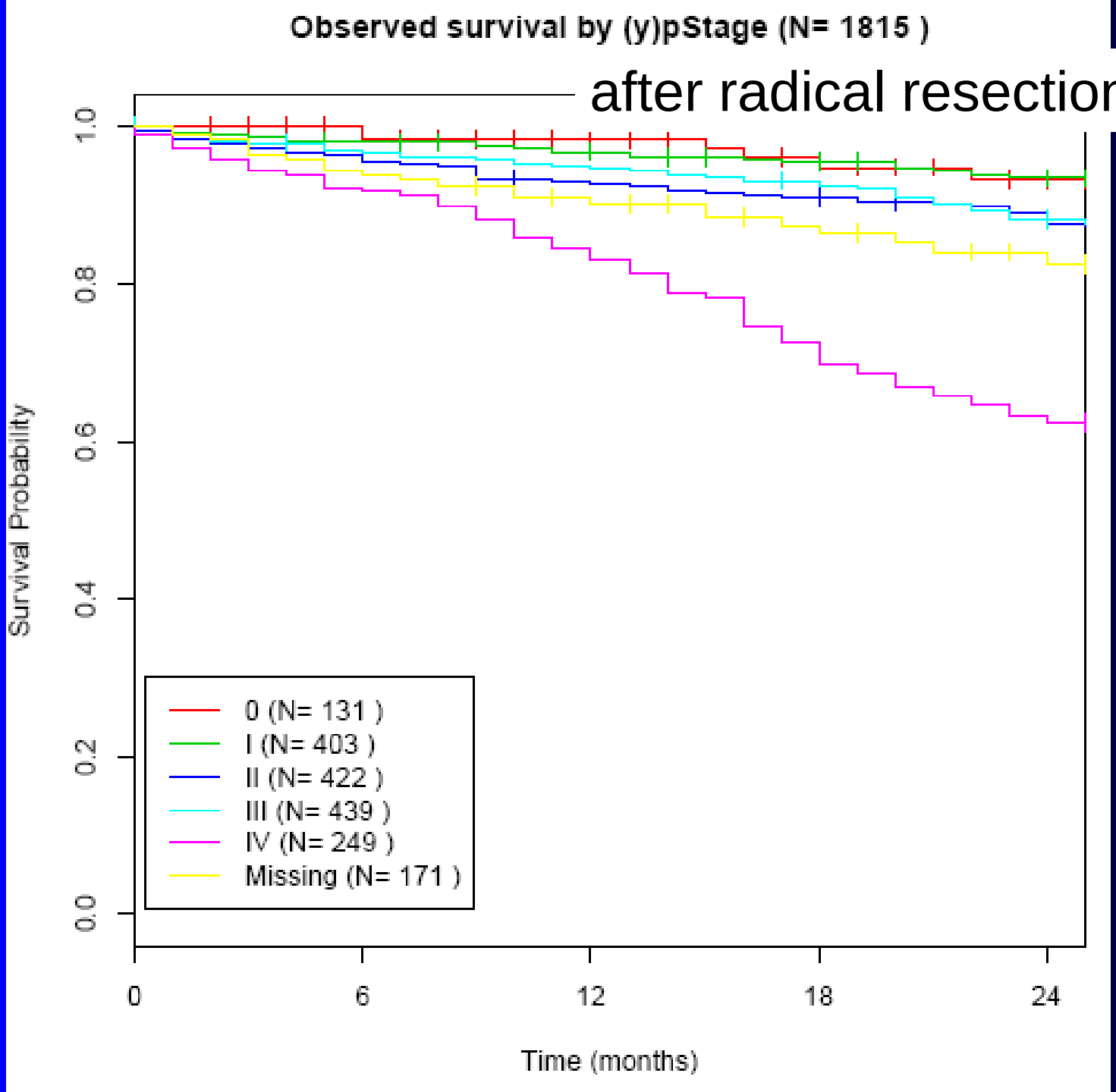


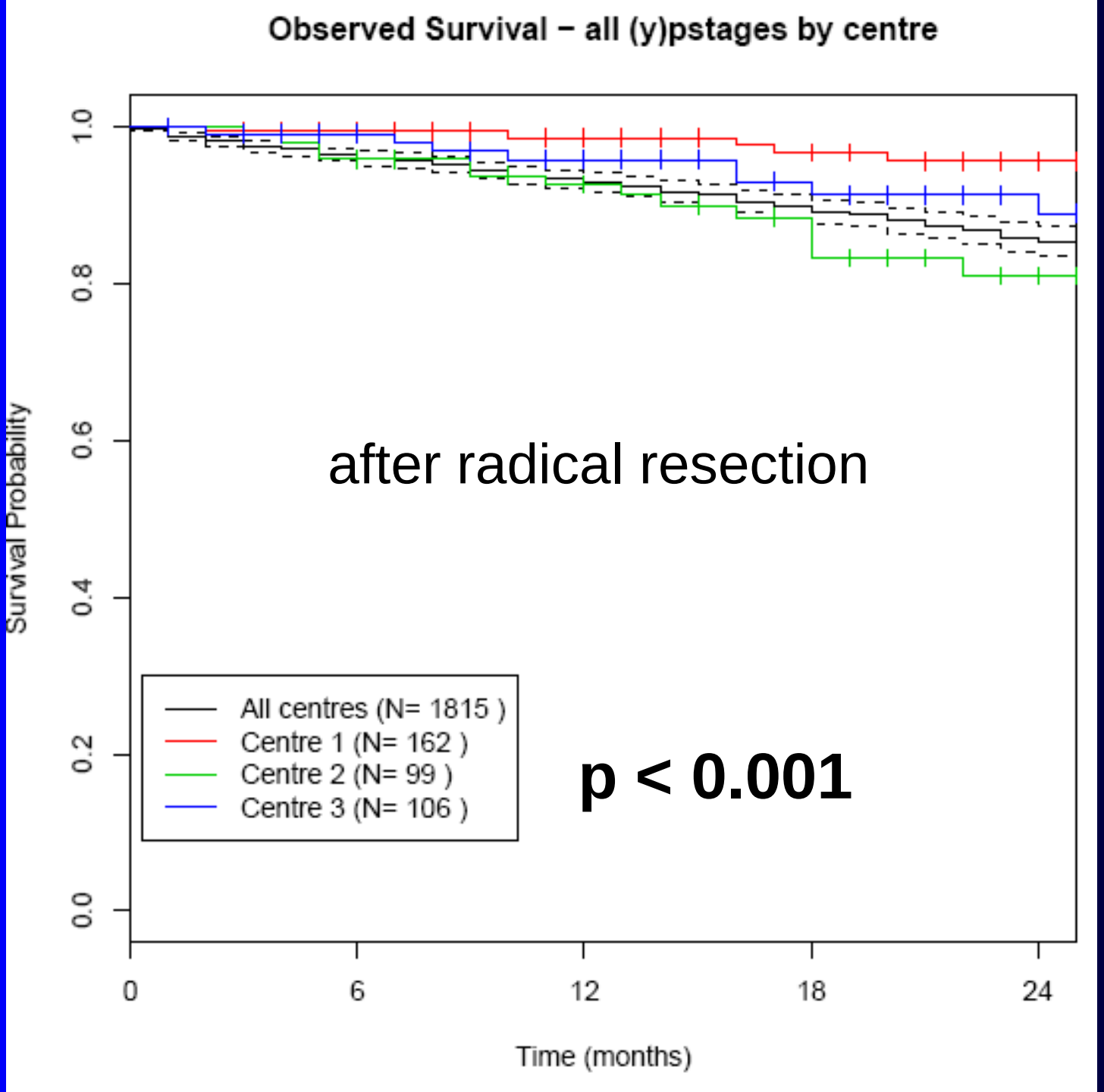
Adjuvant treatment

?



Data on adj chemo if (y)pStage III, R0	**47**
Data on adj R(C)T if pStage II-III, R0	**7**
Data on adj chemo if (y)pStage II-III, R0 started within 3 months	**71**
Data type of adj chemo for (y)pStage II-III, R0	**71**


Observed survival by (y)pStage (N= 1815)
after radical resection
Survival Probability
1.0
0.8
0.6
0.4
0.2
0.0
0 (N= 131)
I (N= 403)
II (N= 422)
III (N= 439)
IV (N= 249)
Missing (N= 171)
0
6
12
18
24
Time (months)


Observed Survival − all (y)pstages by centre
Survival Probability
1.0
0.8
0.6
0.4
0.2
0.0
0
6
12
18
24
Time (months)
All centres (N= 1815)
Centre 1 (N= 162)
Centre 2 (N= 99)
Centre 3 (N= 106)
after radical resection
p < 0.001

The project - CONCLUSIONS

- Profession-driven = voluntary participation
- Educational (re-action) not repressive (sanction)
- Multidisciplinary = teams, not individuals
- Open for all teams at any time
- Funding (government)
- Risk adjusted benchmark (peers, statisticians)
- Evolution of ‘performance’
- Definition of targets / outliers (clinical > statist.)

What ‘target value’ for improvement ?

Median with CI 95%: mediocre progress

The ‘top 10’ teams ? with CI 95% or CI 90% ?
For every QCI or for a set of QCIs ?

How to improve in the ‘top 10’ ?

Statistical vs clinically relevant targets/differences

The participating teams - CONCLUSIONS

- Burden of registration
- Motivation of all team-players (intention vs practice)
- Quality of data (application of definitions, …)
- Completeness of ‘data’ (patients, data)
- Fear for audit (‘slow’ but progressive particip.)
- Educational risk-adjusted benchmarking with re-action
- Variability always present
- Improvement always possible (low & high vol.)


1513
AD


N P. CRANE