

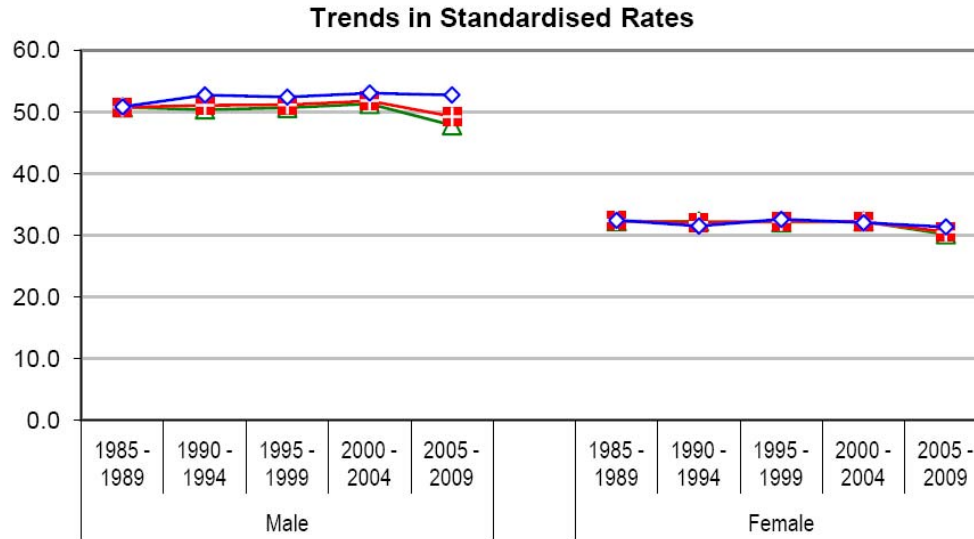
# Population-based Quality Indicators of Cancer Care: the QC<sub>3</sub> pilot study on colorectal cancer patients

A.Bordoni,  
V. Bianchi, L.Mazzucchelli and A.Spitale  
Ticino Cancer Registry  
[www.ti.ch/cancer](http://www.ti.ch/cancer)

# Incidence and mortality trends of Colorectal Cancer

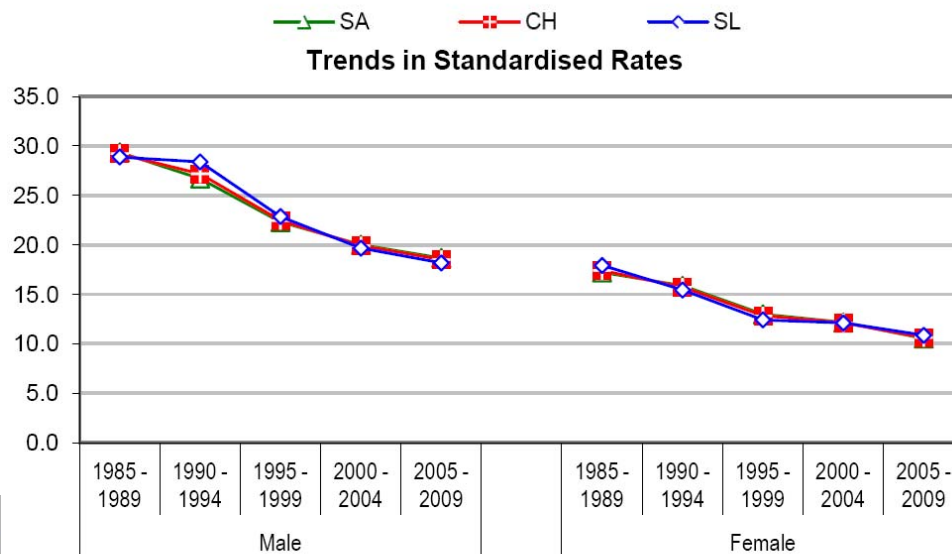
## Ticino versus Switzerland

INCIDENCE



	New cases / year
CH	~ 4000-4100
TI	~ 230-250

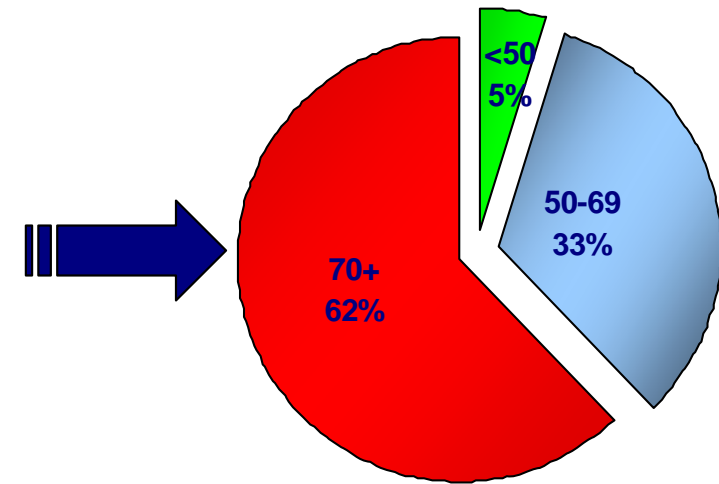
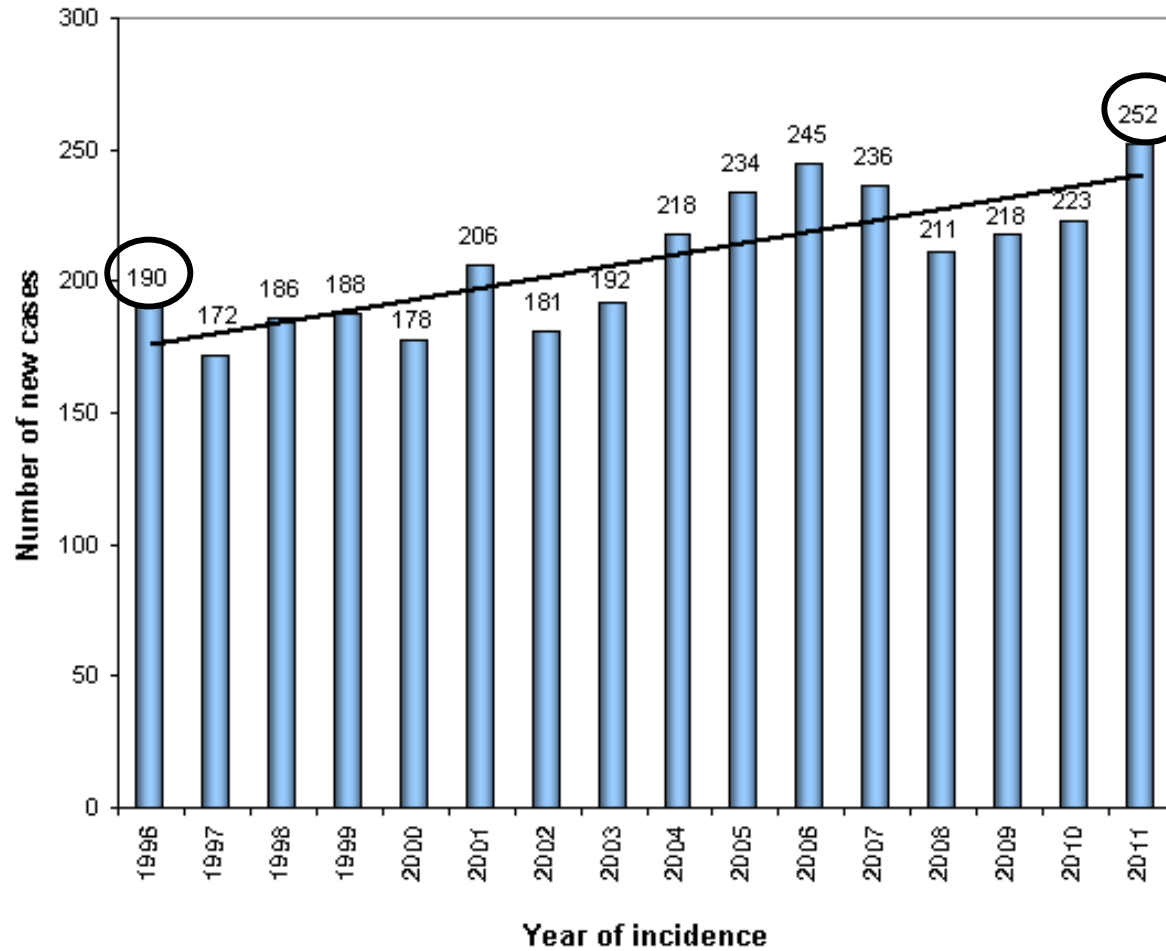
MORTALITY



	Deaths / year
CH	~ 1600-1650
TI	~ 75-80

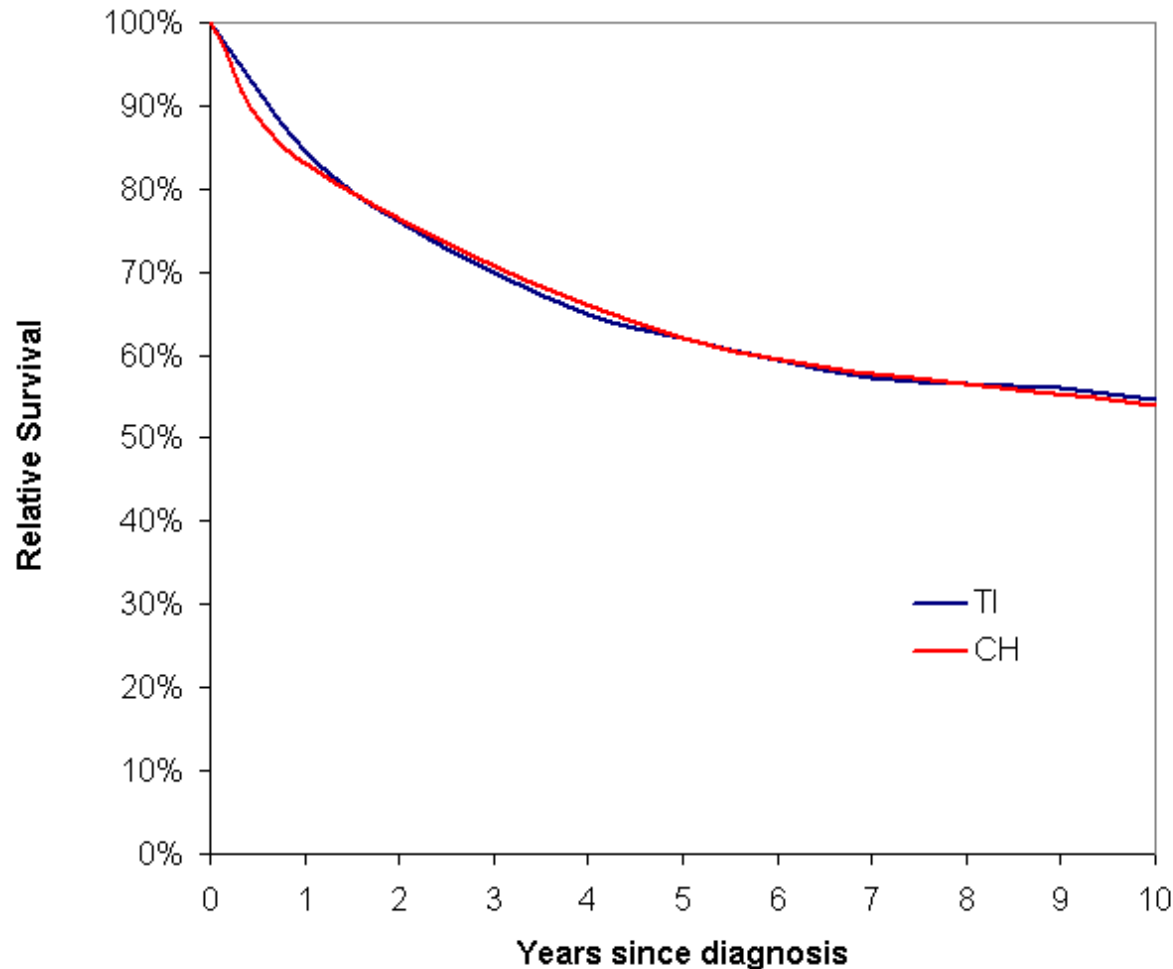


# Colorectal Cancer in Ticino, 1996-2011

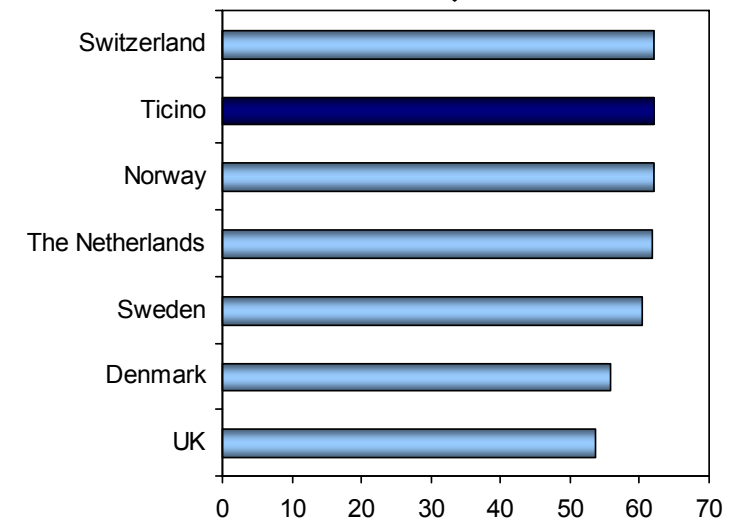


Age group	New diagnosis / year (e.g. 2011)	
	M	F
0-49	7	5
50-69	49	35
70+	77	81
<b>Total</b>	<b>133</b>	<b>121</b>

# Colorectal Survival in Ticino and Switzerland



Years since diagnosis	TI	CH
1	84%	83%
5	62%	62%
10	54%	54%

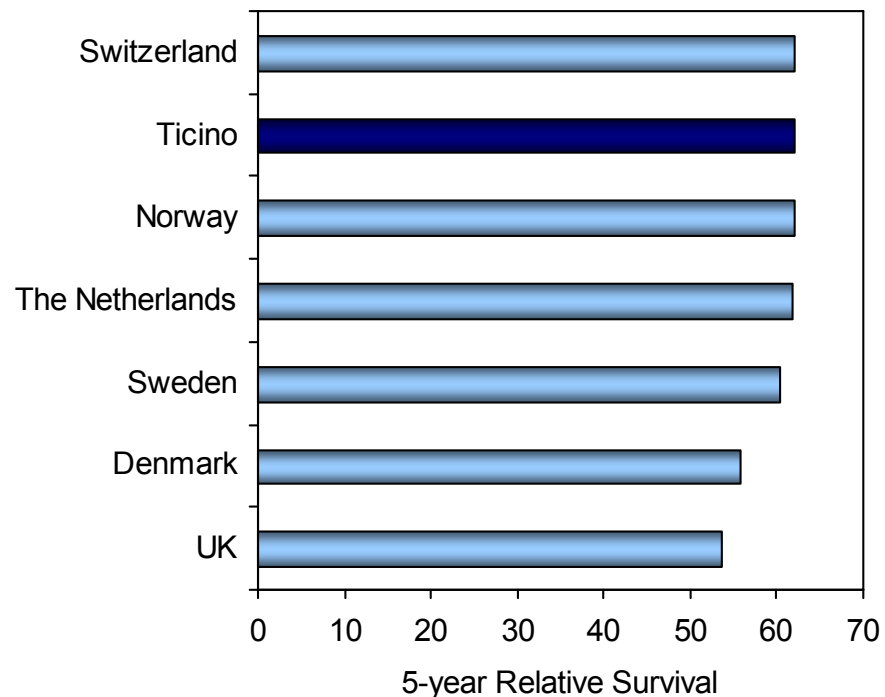


5-year Relative Survival  
Coleman MP *et al.*, Lancet 2011

# Survival Study Colorectal cancer

## Advantages

- **Standardised** procedure, world wide recognised
- Regional and international **comparisons**
- Diagnostic precocity, treatment quality and follow-up **in one value**

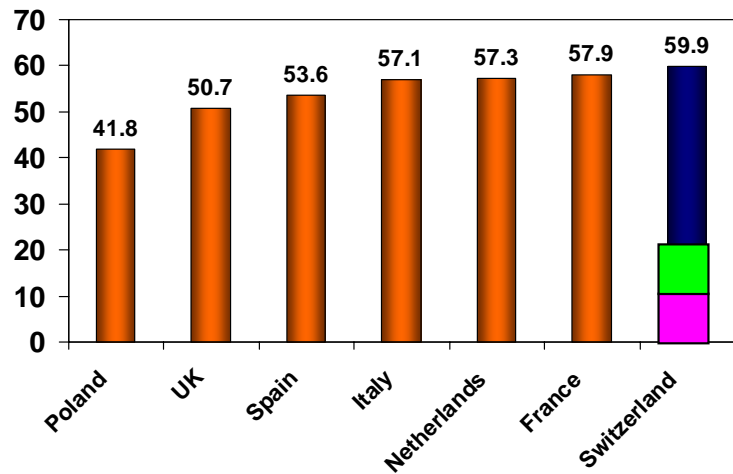
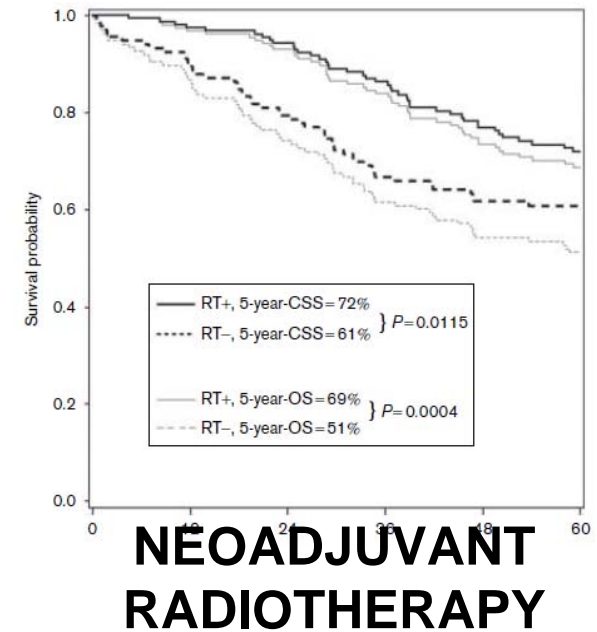
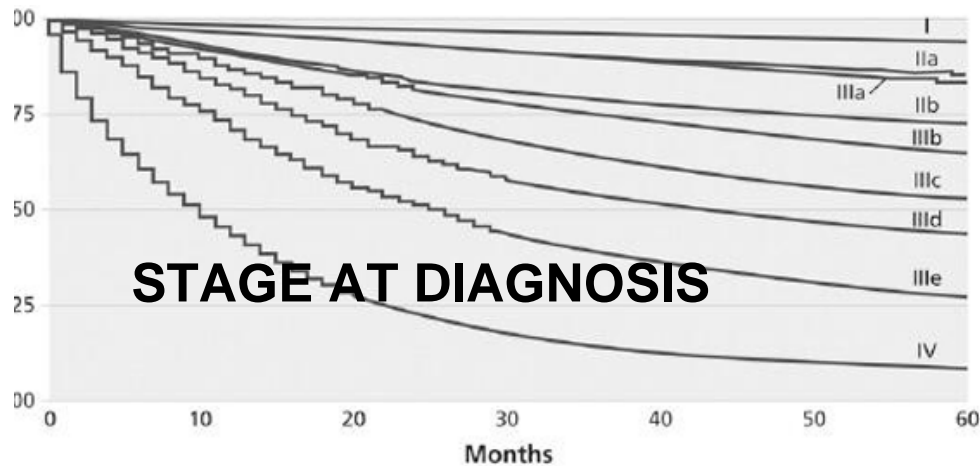


Coleman MP *et al.*, Lancet 2011

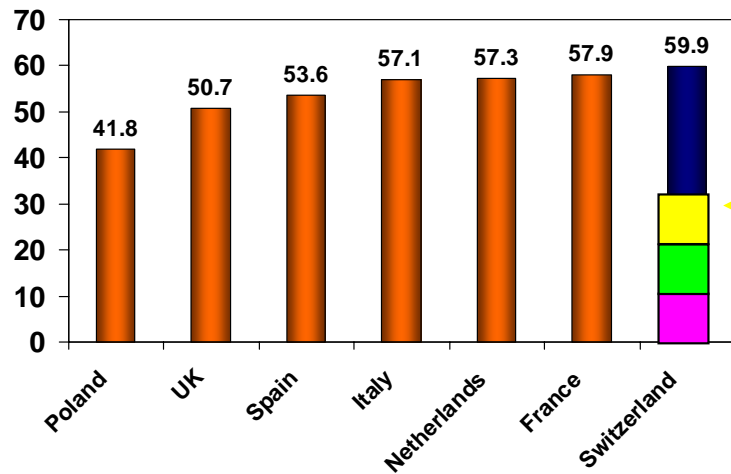
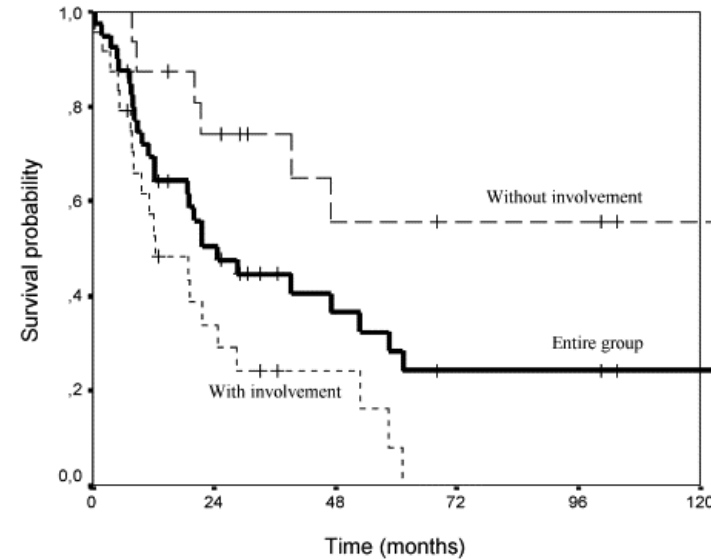
“Disadvantage”

Long follow-up time

# Some methods of QC<sub>3</sub>: defragmentation of survival determinants



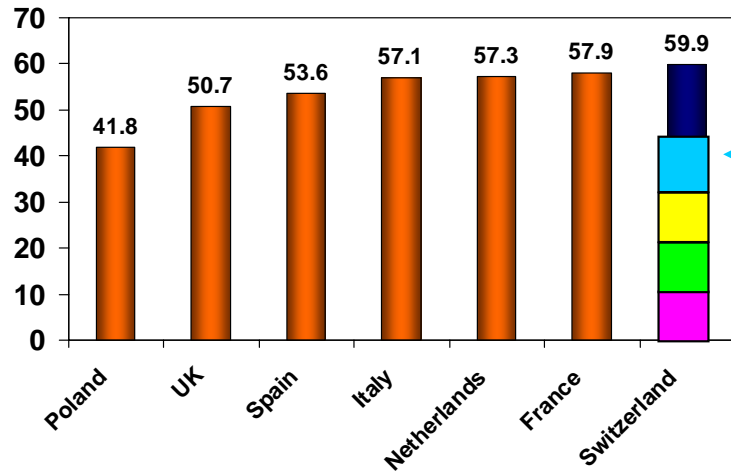
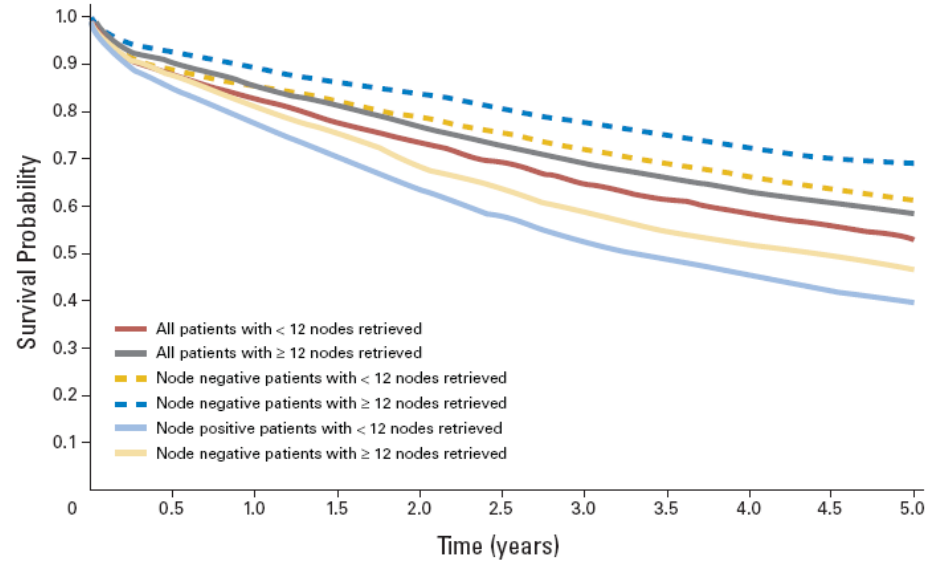
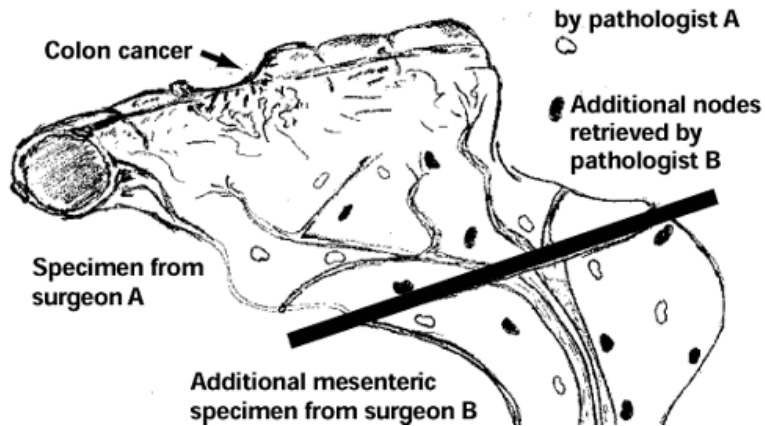
# Some methods of QC<sub>3</sub>: defragmentation of survival determinants



## RESECTION MARGINS

1. R0/R1
2. Proximal, distal, radial
3. Reported by pathologist

# Some methods of QC<sub>3</sub>: defragmentation of survival determinants



**LYMPH-NODES RESECTION**



# Some methods of QC<sub>3</sub>

Quality Indicator

Proportion of patients with  
a number of resected  
lymph nodes  $\geq 12$

Denominator

Patients cancer  
undergoing primary  
surgery  
(with the exception of patients  
undergoing neo-adj RT $\pm$ CT )

**% OF PATIENTS THAT BENEFIT OF.....**

**% OF PATIENTS OBSERVED.....**

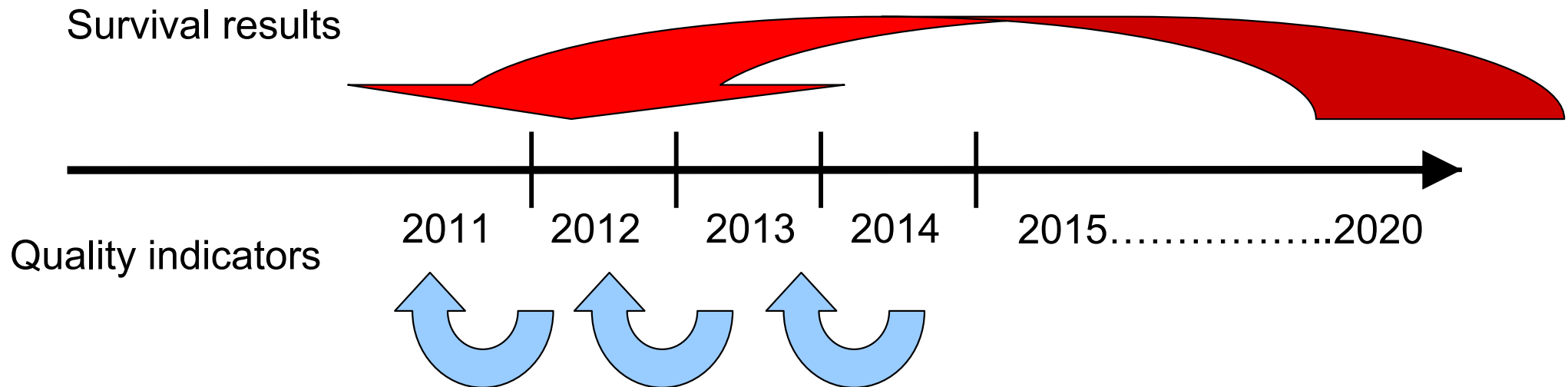
# Why quality indicators?

## Advantages

- **Defragmentation** of survival determinants
- Short follow-up time

## “Disadvantage”

Less worldwide defined → PILOT STUDIES are necessary



# How are the quality indicators defined?

- According to the up-to-date literature
- Through existing guidelines (NCCI, ESMO, other)
- Cancer Registry with a dedicated staff  
(Bianchi-Galdi V, Spitale A, Ortelli L, Bordoni A)

# How are the indicators defined?

## QC<sub>3</sub> Working Groups

### Lung Cancers (n=13):

Dr. med. A. Azzola, PD Dr. med. M. Bongiovanni, PD Dr. med. A. Dutly, Dr. med. A. Franzetti-Pellanda, Dr. med. P. Frösch, Dr. med. S. Györik, Prof. Dr. med. S. Martinoli, Dr. med. F. Martucci, Prof. Dr. med. L. Mazzucchelli, Dr. med. G. Pesce, Dr. med. C. Puligheddu, Dr. med. F. Quadri, Dr. med. F. Zappa.

### Colo-Rectal Cancers (n=16):

Dr. med. J. Barizzi, Dr. med. F. Bihl, Dr. med. D. Christoforidis, Dr. med. A. Franzetti-Pellanda, PD Dr. med. L. Giovanella, Dr. med. J. Heinkel, Dr. med. M. Maffei, Prof. Dr. med. L. Mazzucchelli, Dr. med. B. Miazza, Dr. med. A. Pelloni, Dr. med. C. Quattropiani, Prof. Dr. med. R. Rosso, Dr. med. P. Saletti, Dr. med. M.C. Valli, Dr. med. M. Varini, PD Dr. med. R. Wytttenbach.

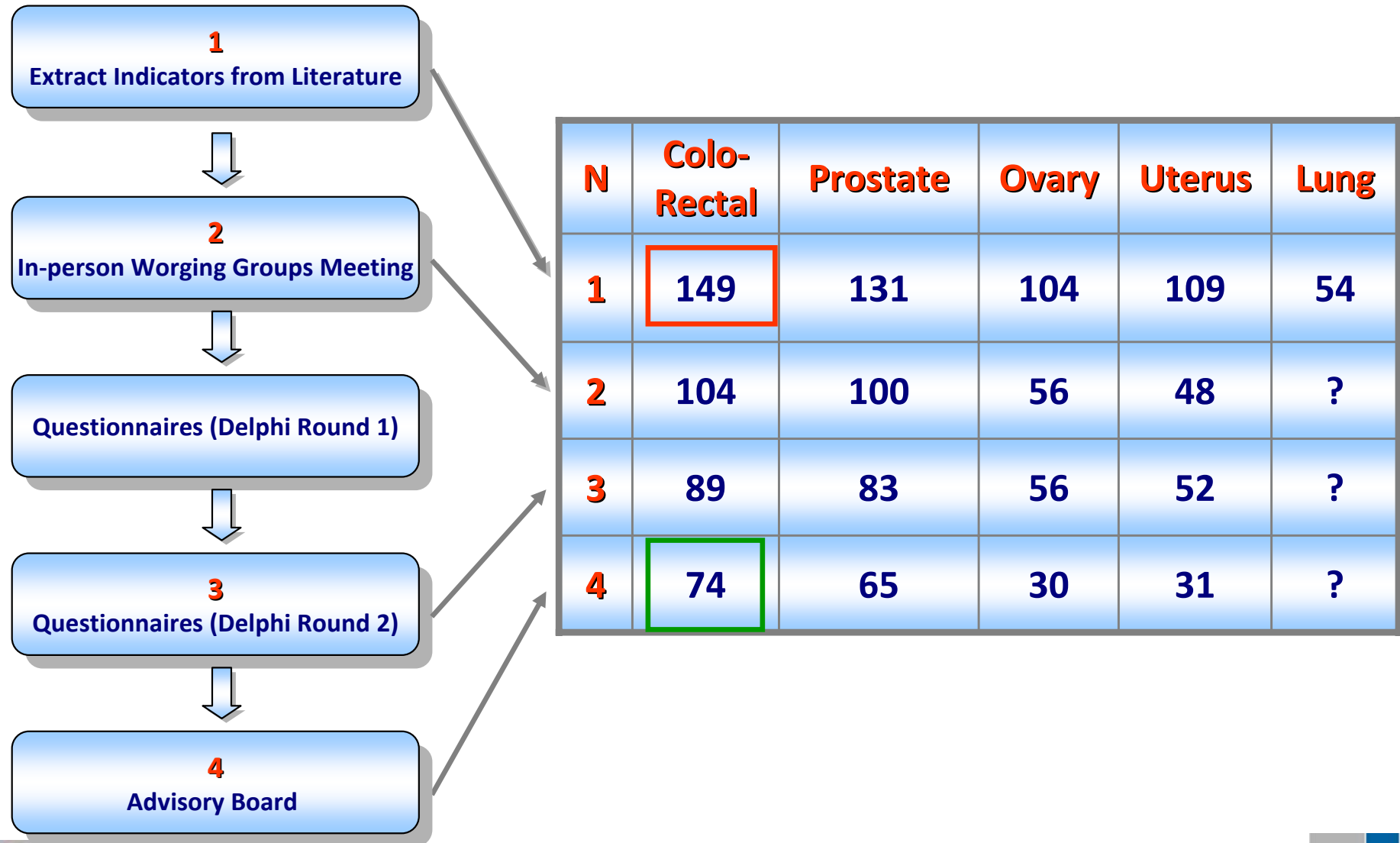
### Prostate Cancers (n=11):

Dr. med. G. Ballerini, Dr. med. G. Casanova, Dr. med. S. Crippa, Dr. med. A. Lladò, Prof. Dr. med. L. Mazzucchelli, Dr. med. G. Pesce, Dr. med. A. Pedrazzini, Dr. med. E. Roggero, Dr. med. F. Stoffel, Dr. med. S. Suriano, PD Dr. med. R. Wytttenbach.

### Ovarian/Uterine Cancers (n=12):

Dr. med. G. Ballerini, Dr. med. L. Bronz, Dr. med. A. Calderoni, Dr. med. L. Ceriani, Dr. med. C. Cannizzaro, Dr. med. T. Gyr, Dr. med. M. Manganiello, Dr. med. C. Marini, Prof. Dr. med. L. Mazzucchelli, Dr. med. A. Richetti, Dr. med. T. Rusca, Prof. Dr. med. C. Sessa

# Process used to select QC<sub>3</sub> quality indicators



# QC<sub>3</sub> Colo-Rectal Cancer Advisory Board

**Pathology:** Prof. Dr. med. Phil Quirke, Director, Leeds Institute of Molecular Medicine (LIMM), Section of Pathology, Wellcome Trust Brenner Building, St James's University Hospital, Leeds (UK)

**Oncology:** Prof. Dr. med. Roberto Labianca, Director, Oncology and Haematology Dept., Ospedali Riuniti, Bergamo (I)

**Gastroenterology:** Prof. Dr. med. Gian Dorta, Director, Digestive Endoscopy Dept., Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne (CH)

**Surgery:** Prof. Dr. med. Emmanuel Tiret, Director, Pôle Digestif des Hôpitaux Univesitaires Paris Est, Chef Service de Chirurgie Générale et Digestive, Hôpital Saint-Antoine, Paris (F)

**Radiology:** Prof. Dr. med. Dominik Weishaupt, Director, Radiology Dept., Stadtspital Triemli, Zürich (CH)

**Radiation Therapy:** Prof. Dr. med. Vincenzo Valentini, Director, Unità Operativa Complessa Radioterapia 1, Policlinico Universitario Agostino Gemelli, Rome (I)

**Nuclear Medicine:** Prof. Dr. med. Stefano Fanti, Director, PET Center, Policlinico S. Orsola-Malpighi, Bologna (I)

**Cancer Registry:** Prof. Dr. med. Jean Faivre, Director, Registre Bourguignon des Cancers Digestifs, Dijon Cedex (F)

**Local Experts:** Prof. Dr. med. Franco Cavalli, Scientific Director, Oncologic Institute of Italian Switzerland (IOSI), Bellinzona (CH)

Prof. Dr. med. Sebastiano Martinoli, Director, General Surgery Dept., Clinica Luganese, Lugano (CH)



# QC<sub>3</sub> Prostate Cancer Advisory Board

**Pathology:** Prof. Dr. J.R. Srigley, McMaster University, Credit Valley Hospital, Mississauga (CDN)

**Oncology:** Prof. Dr. Ian Tannok, Director, Medical Oncology and Medical Biophysics Dept., Princess Margaret Hospital, Toronto (CDN)

**Urology:** Prof. Dr. Peter T. Scardino, Director, General Surgery Dept., Memorial Sloan-Kettering Cancer Center, New York (USA)

**Radiology:** Prof. Dr. Harriet Thöny, Diagnostic Radiology Dept., Inselspital, Bern (CH)

**Radiation Therapy:** Prof. Dr. Raymond Miralbell, Director, Radiation Oncology Dept., Hôpitaux Universitaires Genève, Genève (CH)

**Cancer Registry:** Dr. Renée Otter, Director, Comprehensive Cancer Center North Netherlands, Groningen (The Netherlands)

**Local Experts:** Prof. Dr. Michele Ghilmini, Medical Director, Medical Oncology Dept., Oncologic Institute of Italian Switzerland (IOSI), Bellinzona (CH)

# QC<sub>3</sub> Gynaecologic Cancer Advisory Board

**Pathology:** Prof. Dr. Eshter Oliva, Pathology Dept., Massachussets General Hospital, Boston (USA)

**Gynaecology - Oncology:** Prof. Dr. René H.M. Verheijen, Director, Surgical and Oncological Gynaecology Inst., Reproductive Medicine and Gynaecology Dept., University Medical Center, Uthecht (The Netherlands)

**Radiation Therapy:** Prof. Dr. Akila N. Viswanathan, Director, Gynaecologic Radiation Oncology Dept., Dana-Farber Cancer Institute, Boston (USA)

**Cancer Registry:** Prof. Dr. Hélène Sancho-Garnier, Scientific Director, Epidaure - Pôle prévention du CRLC Val d'Aurelle, Montpellier (France)



# Aims of quality indicator cancer care study?

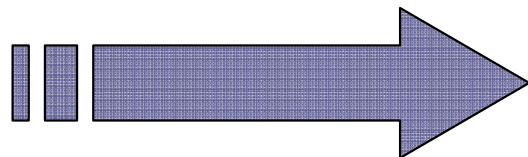
- Aim is **not** to control doctors! Aim is to additionally stimulate the **discussion based on data** (cultural process)
- To understand/realize if there is still **room for additional increase** of quality on cancer care
- To in **deeper analyse** at the regional level survival results
- To produce up-to-date quality indicators **without waiting for survival data (ideally yearly produced)** that could be translated in a short-term benefit for patients

# Aims of quality indicator cancer care study?

- The study is population-based (Cancer Registry, **no selection bias**) and concerns public and private settings, ensuring a real description.
- **Results should be compared** with other national and/or international initiatives
- The QC<sub>3</sub> study is based on expertise and active involvement of local health care providers representing all major disciplines (epidemiology, statistic, and clinical experts in pathology, radiology, surgery, radio-oncology, oncology), thus **increasing quality, acceptance and translation of results into the daily clinical practice**

# Open questions on quality indicator cancer care study.....

- Are all the proposed indicators through the Delphy process **detectable** in the real world? We are now in a “pilot-phase” .....
- Are the proposed indicators **useful for other reality in Switzerland?**



**Discussion should go on...**

# Open questions on the quality indicator cancer care study.....

- Is it possible to **promote** similar studies in other region/cantonal cancer registries of Switzerland?
- Who will pay such kind of studies, long-term studies, so permitting **trend analysis** of quality indicators and/or the **evaluation of other cancer sites**
- Will this type of studies be compatible with the scheduled **new law on cancer registration** in Switzerland?

# We are really grateful for the support of the study sponsors:



*Ricerca Svizzera Contro il Cancro*



*Zonta Club Locarno*



*Accademia Svizzera delle Scienze Mediche*



*Ente ospedaliero cantonale*



*Repubblica e cantone Ticino*