

# Prostatic Cancer Survival in Switzerland : 10 Registries, population-based study GRELL, Montreal 2007

JM Lutz, P.Pury, C.Bouchardy, Geneva

F.Levi, Neuchatel, Vaud

S.Ess, St-Gall & Appenzell

N.Probst, Zurich

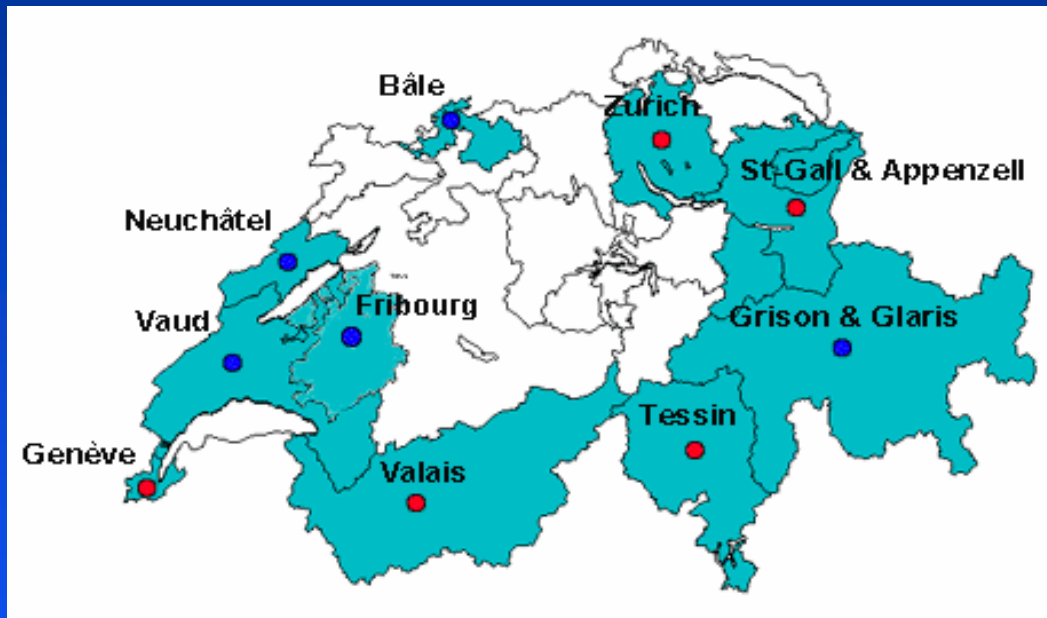
G.Jundt, Bale City & Countryside

D.De Weck, Valais

H.Frick, Grisons & Glaris

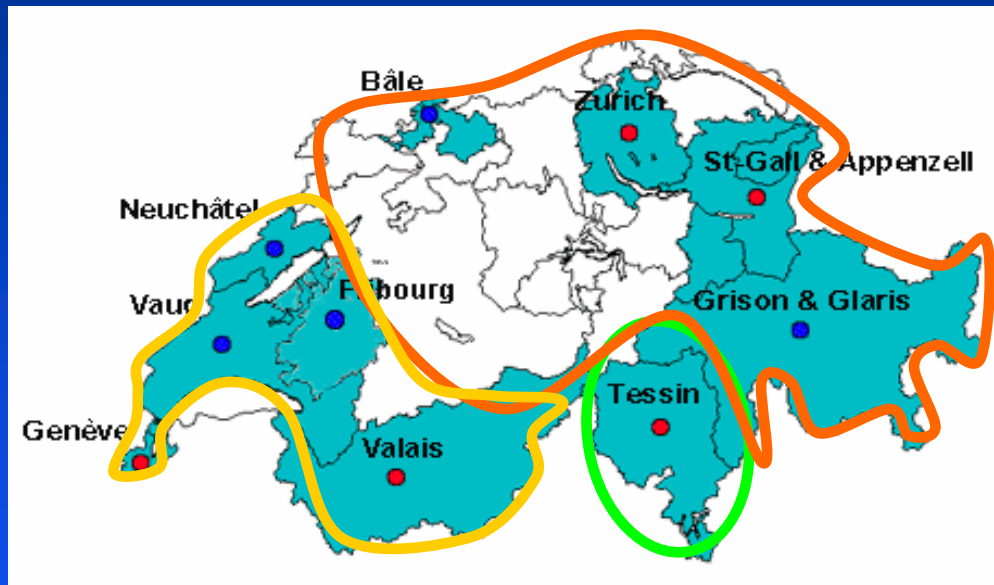
A.Bordoni, Ticino

# Cancer registration in Switzerland : 10 Registries, covering 4.3 millions inhabitants (60%)



- Geneva (1970)
- Neuchatel (1974)
- Vaud (1974)
- St-Gall & Appenzell (1980)
- Zurich (1980)
- Bale City & Countryside (1981)
- Valais (1989)
- Grisons & Glaris (1989)
- Ticino (1996)
- Fribourg (2005)

Three regions having different languages and culture :



**German speaking area :**

Bale, Zurich, St Gall-Appenzell, Grisons-Glaris

**Italian speaking area :**

Ticino

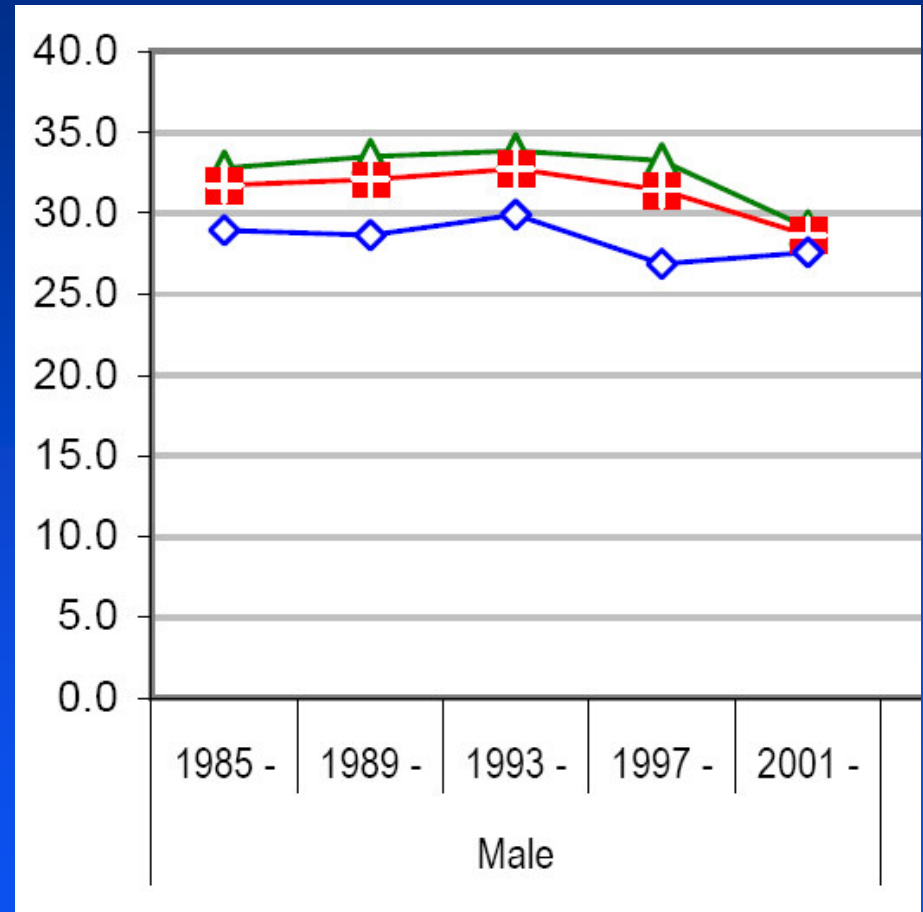
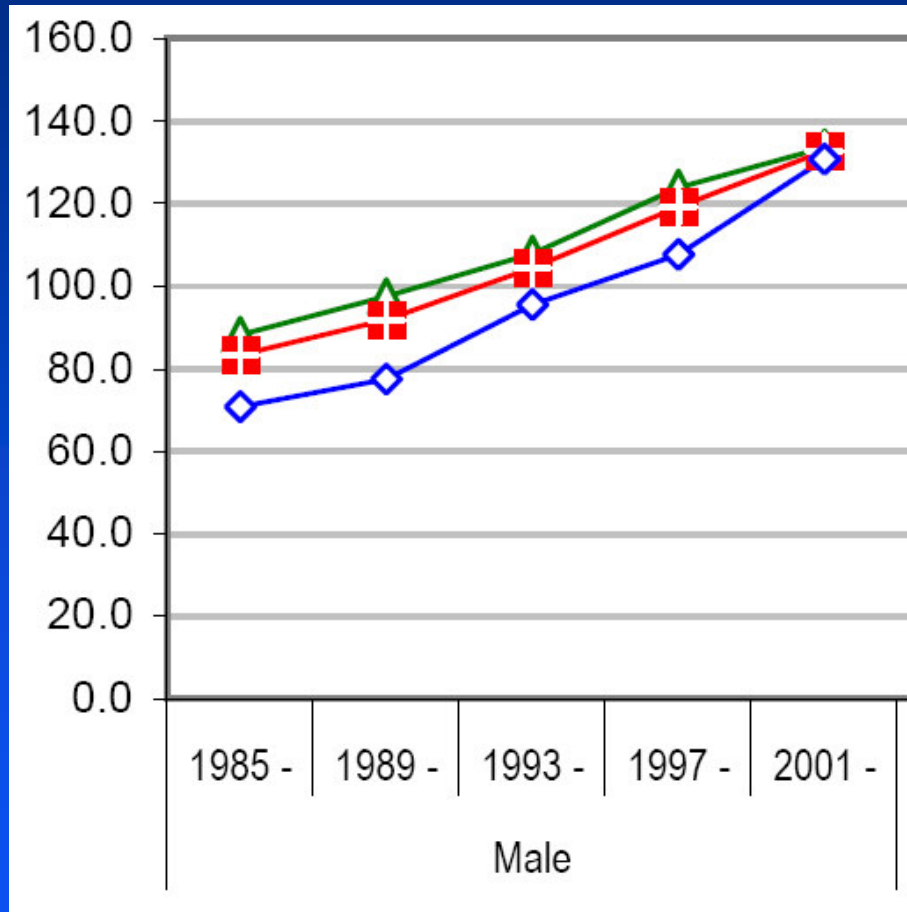
**French speaking area :**

Geneva, Valais, Neuchatel, Vaud

# Incidence

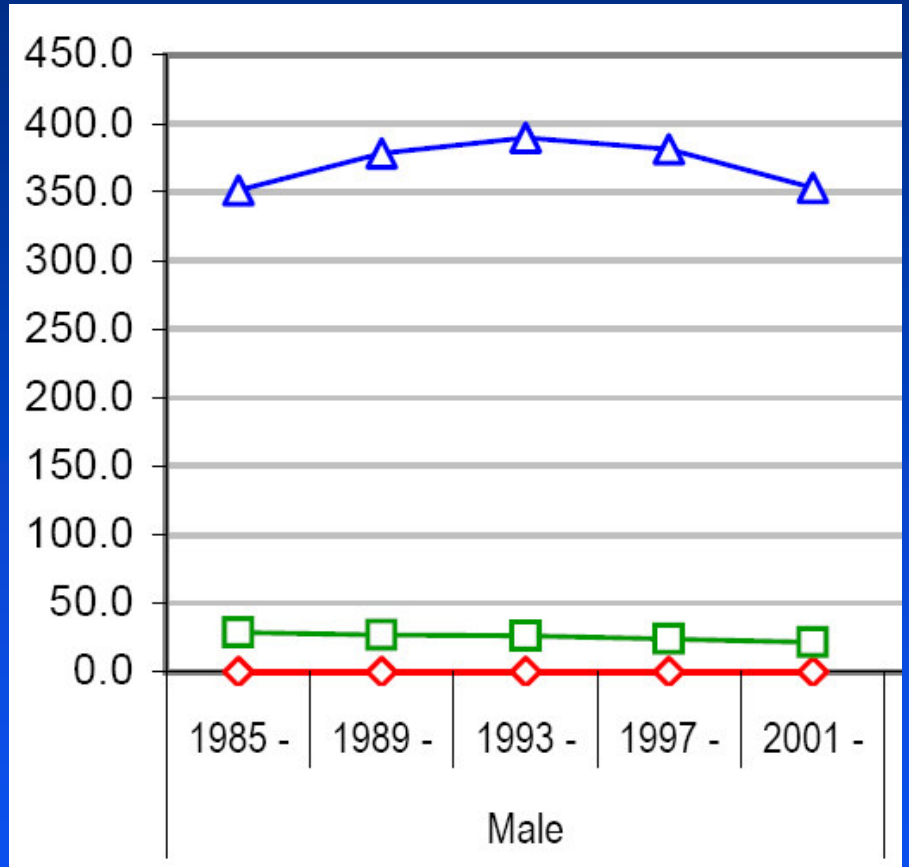
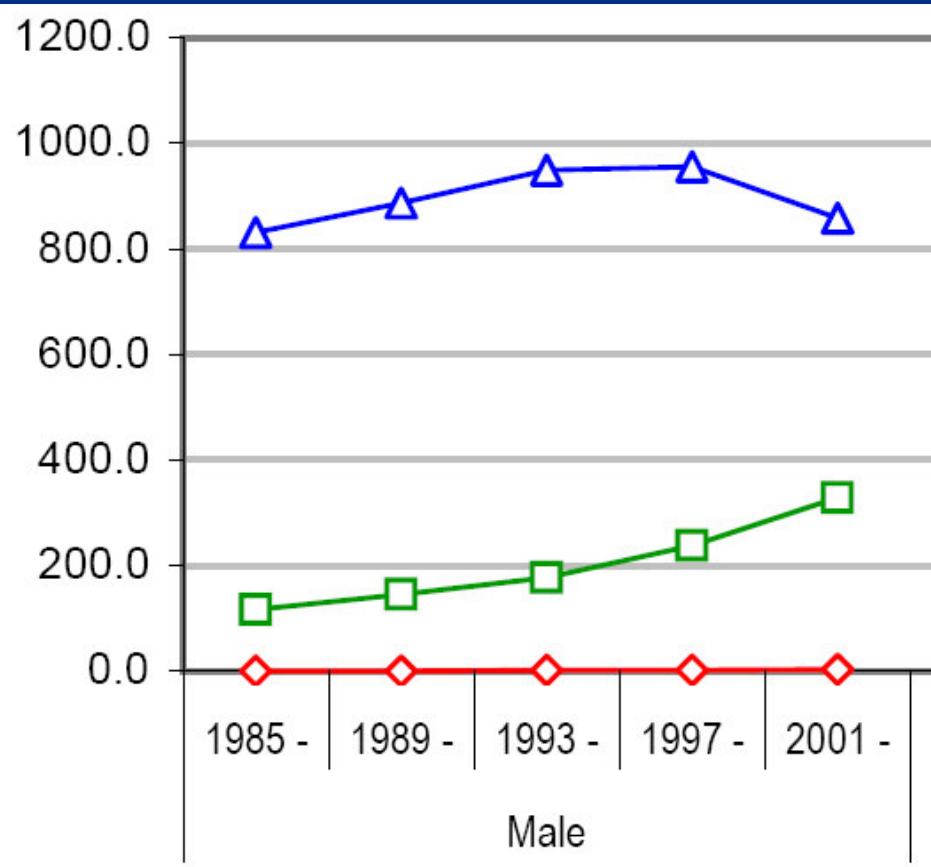
*(standardized rates)*

# Mortality



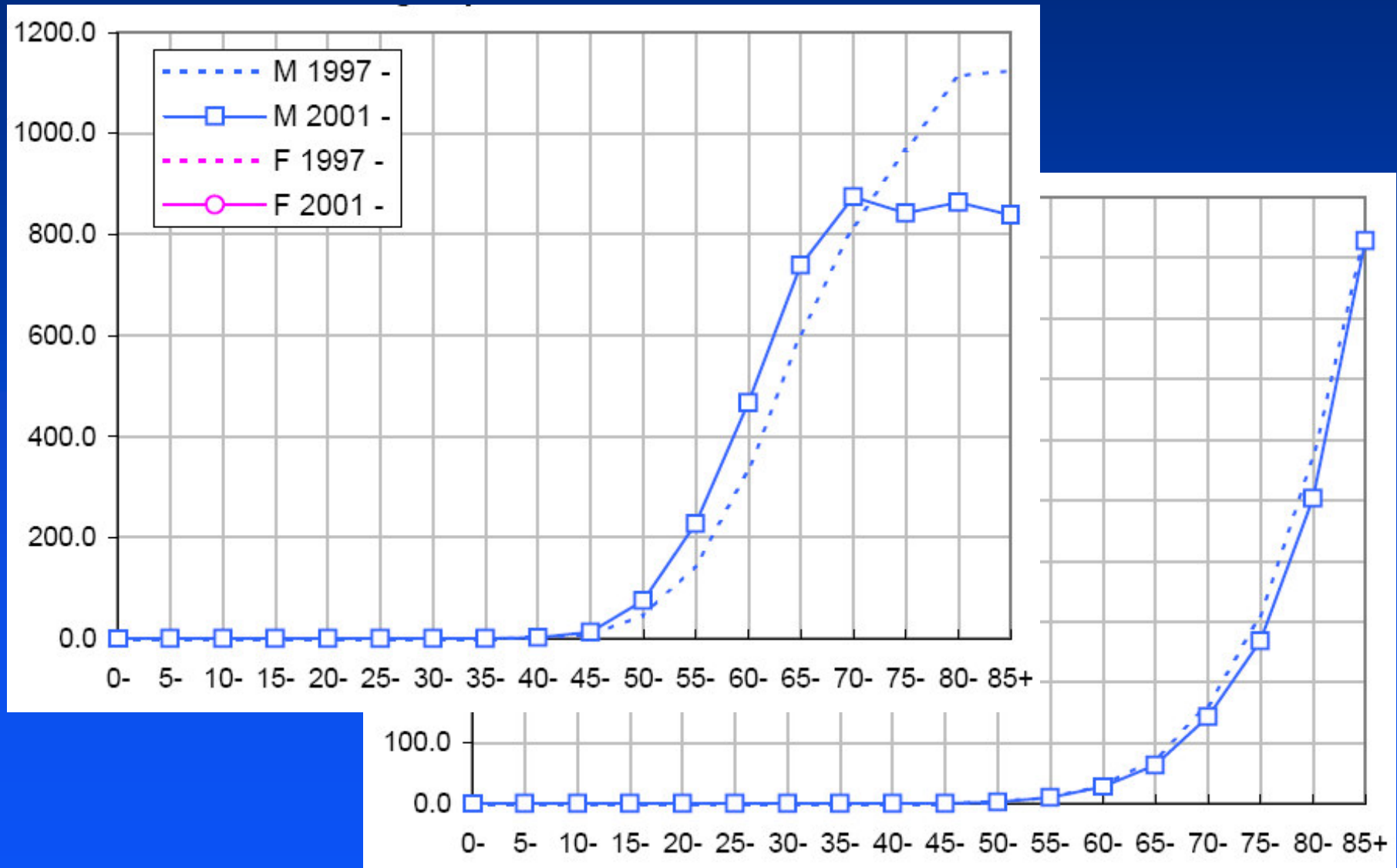
# Incidence (by age)

# Mortality



—◇— 20-49    —□— 50-69    —△— 70+

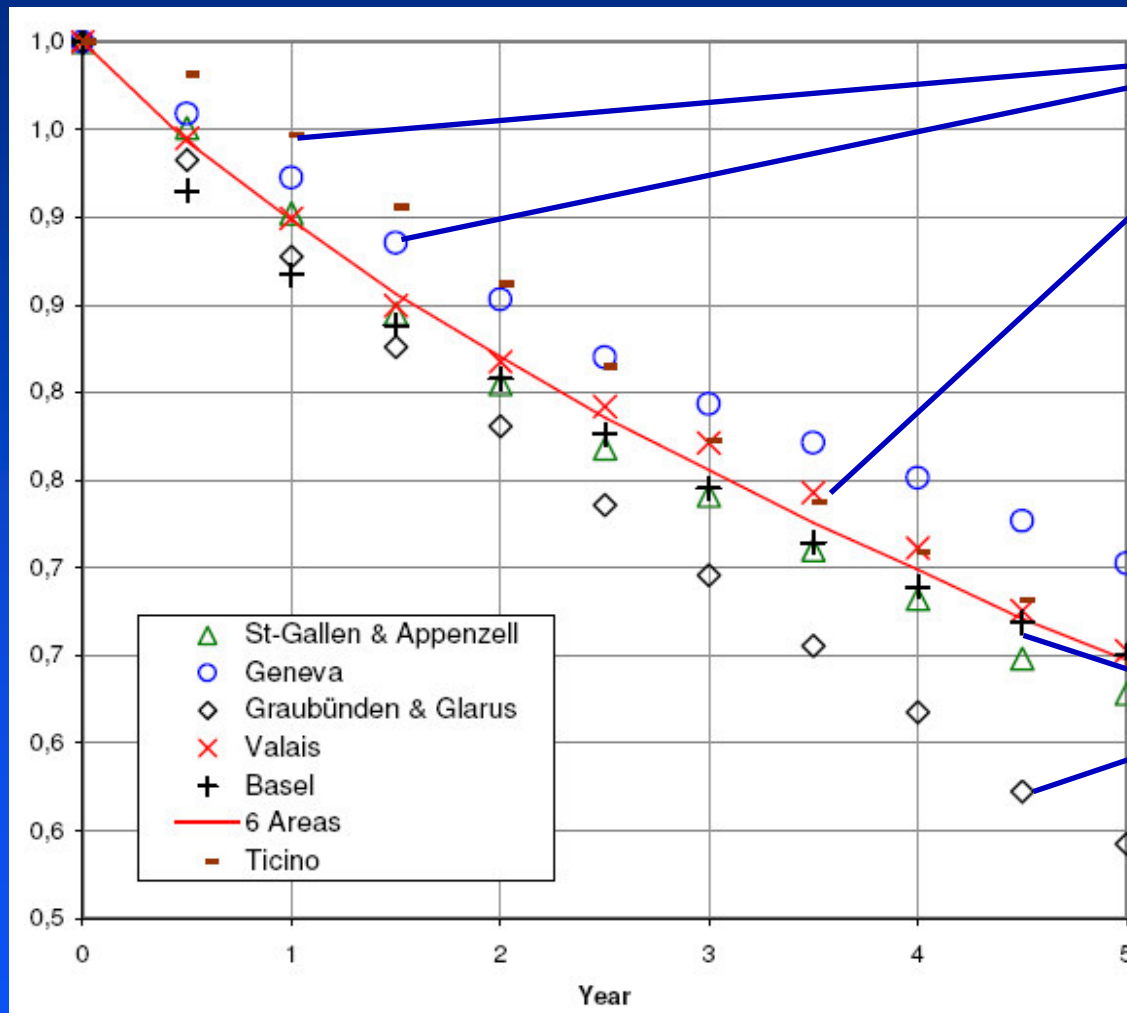
# Age specific incidence and mortality rates



# Trends in age standardized survival rates in Switzerland, incident cases 1989-2005

Survival	Period	ASR	CI 95%
1 year	1989-1992	0,90	(0,89 - 0,92)
	1993-1996	0,92	(0,91 - 0,93)
	1997-2000	0,94	(0,93 - 0,95)
	2000-2005	0,95	(0,94 - 0,96)
5 years	1989-1992	0,65	(0,63 - 0,68)
	1993-1996	0,72	(0,70 - 0,75)
	1997-2000	0,79	(0,77 - 0,81)
	2000-2005	0,81	(0,79 - 0,84)
10 years	1989-1992	0,50	(0,46 - 0,53)
	1993-1996	0,58	(0,54 - 0,62)
	1997-2000	0,68	(0,59 - 0,77)

# Observed 5-year survival, cases 1997-2000

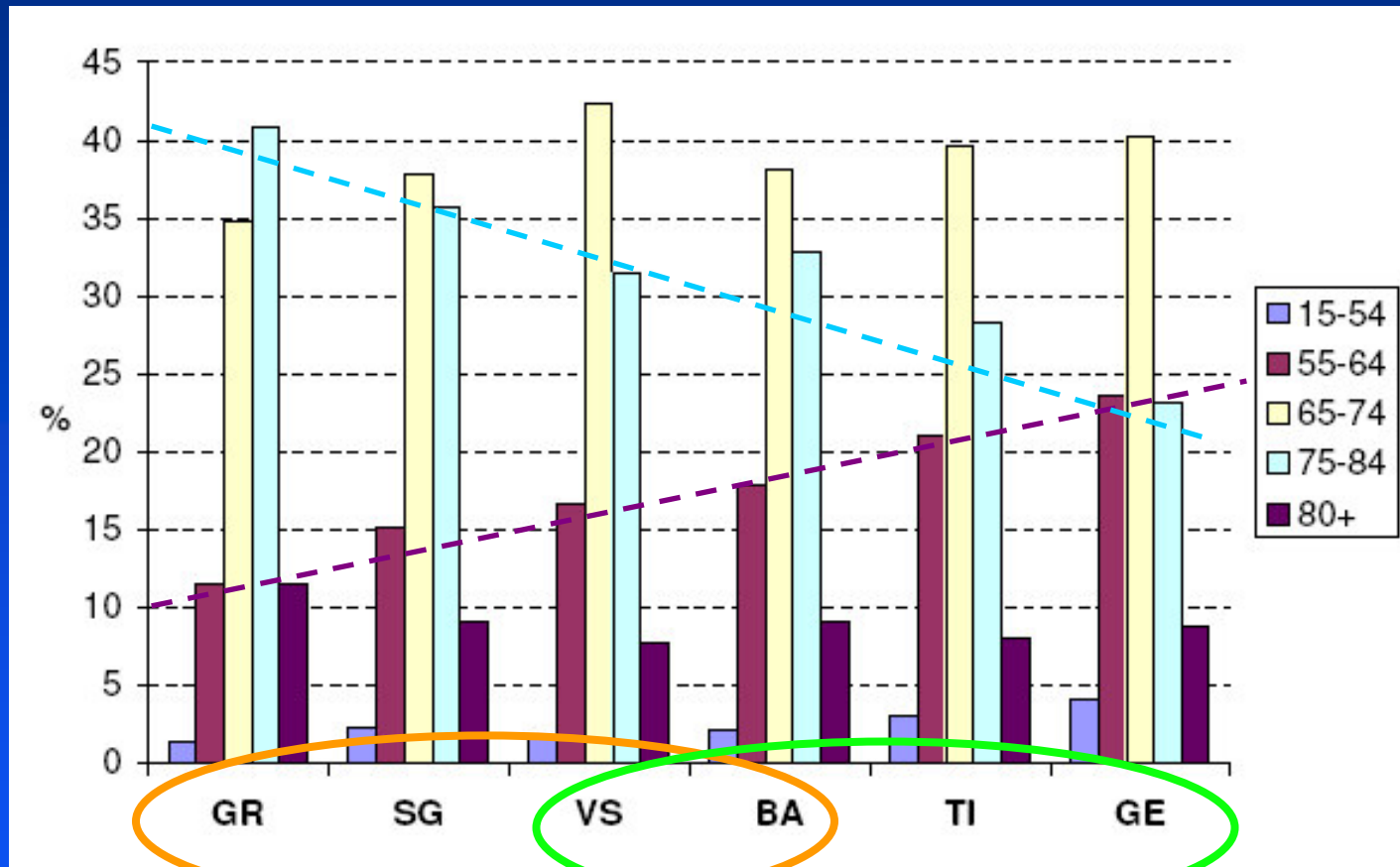


"latin" areas

German areas



# Age distribution by cantons, all periods



# Relationship between age and stage (1) ...

M0 n= 7'114 (49%)

	<55	55-64	65-74	75-84	85+
T1	7%	13%	18%	21%	22%
T2	53%	51%	45%	39%	34%
<b>Total</b>	<b>60%</b>	<b>64%</b>	<b>63%</b>	<b>60%</b>	<b>56%</b>
T3	33%	29%	30%	22%	16%
T4	5%	3%	2%	3%	5%
<b>Total</b>	<b>38%</b>	<b>32%</b>	<b>32%</b>	<b>25%</b>	<b>21%</b>
Tx	2%	4%	6%	15%	22%
T ?	0%	1%	1%	1%	0%

# Relationship between age and stage (1) ...

M1 n= 1'909 (13.2%)

	<55	55-64	65-74	75-84	85+
T1	4%	2%	2%	3%	1%
T2	15%	14%	22%	17%	16%
<b>Total</b>	<b>19%</b>	<b>16%</b>	<b>24%</b>	<b>20%</b>	<b>17%</b>
T3	30%	41%	35%	31%	23%
T4	33%	18%	17%	18%	17%
<b>Total</b>	<b>63%</b>	<b>59%</b>	<b>52%</b>	<b>49%</b>	<b>40%</b>
Tx	17%	23%	22%	30%	42%
T ?	2%	2%	2%	2%	2%

## Relationship between age and stage (3) ...

		<55	55-64	65-74	75-84	85+
M0	N0	91%	91%	90%	83%	81%
	N1	6%	6%	6%	3%	3%
	Nx	2%	3%	4%	13%	16%
	N?	0%	0%	0%	0%	0%
M1	N0	28%	12%	14%	13%	3%
	N1	39%	33%	29%	17%	21%
	Nx	33%	54%	57%	70%	76%
	N?	0%	0%	0%	0%	0%

## "M" distribution (%), by registry

	M0	M1	Mx	M?	N cases
SG	44	14	43	0	3'828
GR	50	18	32	0	1'074
BA	55	11	34	1	3'633
VS	21	11	45	23	1'378
GE	54	15	30	1	3'074
TI	67	12	4	17	1'437
All	49	13	34	4	14'424

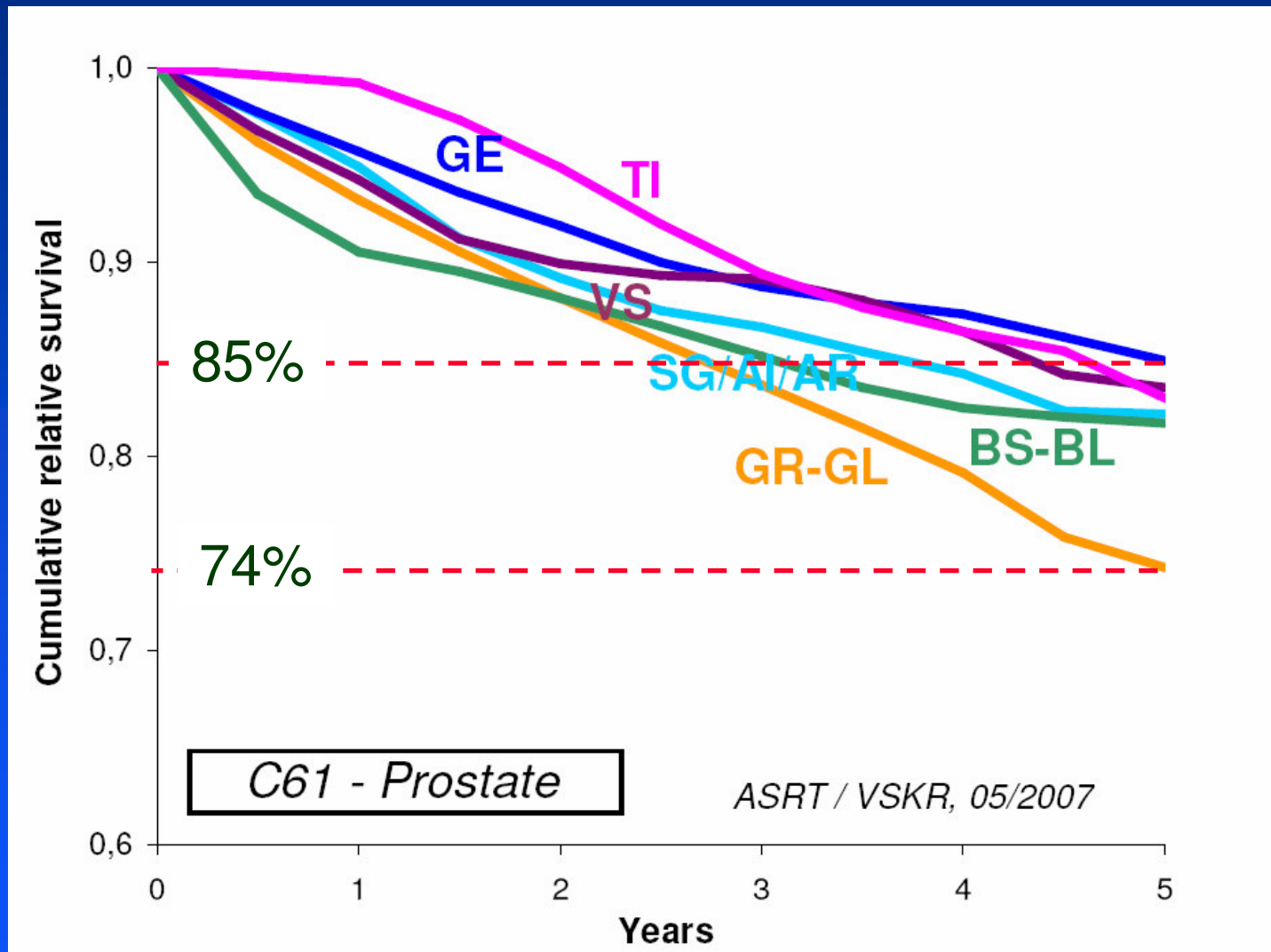
## Geographical comparisons for incident cases 1997-2000, adjusted on age, T and N (Cox)

BA	1'972	(25%)	T1	1'219	(15%)
GE	1'972	(25%)	T2	3'073	(38%)
SG	2'069	(25%)	T3	1'936	(24%)
VS	507	(6%)	T4	402	(5%)
GR	320	(4%)	Tx	1'524	(19%)
TI	1'314	(16%)			
Total	8'154		N-	4'561	(56%)
			N+	492	(6%)
Lost of FU	1.7%		Nx	3'101	(38%)
	(range 0.03% – 2%)				

# Geographical comparisons for incident cases 1997-2000, adjusted on age, T and N

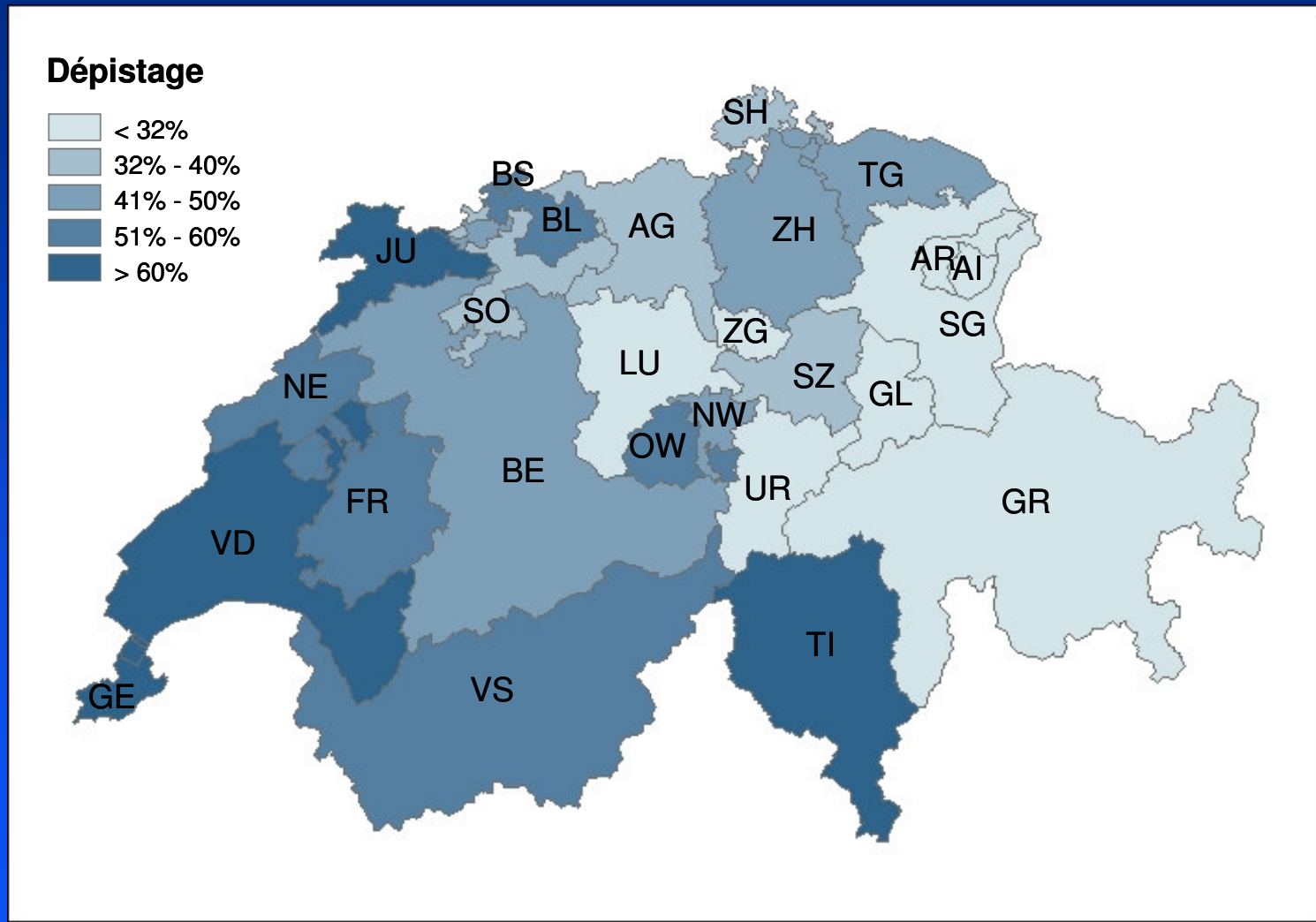
	Model1	Model2	Model 3	Model 4	(95% CI)
Age >50	1,10	1.08	1.08	1.08	1.07-1.09
T1		1	1	1	
T2		1.1	1.2	1.16	0.98-1.37
T3		1.7	1.6	1.58	1.34-1.86
T4		4.3	3.3	3.26	2.68-3.95
Tx		2.2	1.9	1.98	1.68-2.33
N0			1	1	
N1			3.1	3.05	2.58-3.60
Nx			2.0	1.92	1.72-2.14
GE				1	
BA				1.11	0.97-1.27
SG				1.25	1.10-1.42
VS				1.16	0.96-1.39
GR-GL				1.10	0.90-1.34
TI				0.99	0.85-1.16

# 5-year relative survival, by cantons cases 1997-2000





# Proportion of women having ever had a mammography in Switzerland (Swiss National Survey, 1997)



## Conclusions

- Survival after prostate cancer improved during the last decades in Switzerland.
- Moderate unequalities in relative survival are observed between cantons, with German part having about 10% poorer prognosis than "Latin" cantons.
- Accuracy of clinical data on staging is not sufficient to estimate whether or not the differences are related with early stage at diagnosis.