

Cancer Mapping in Alpine Regions 2001-2005 Results and Future Plans

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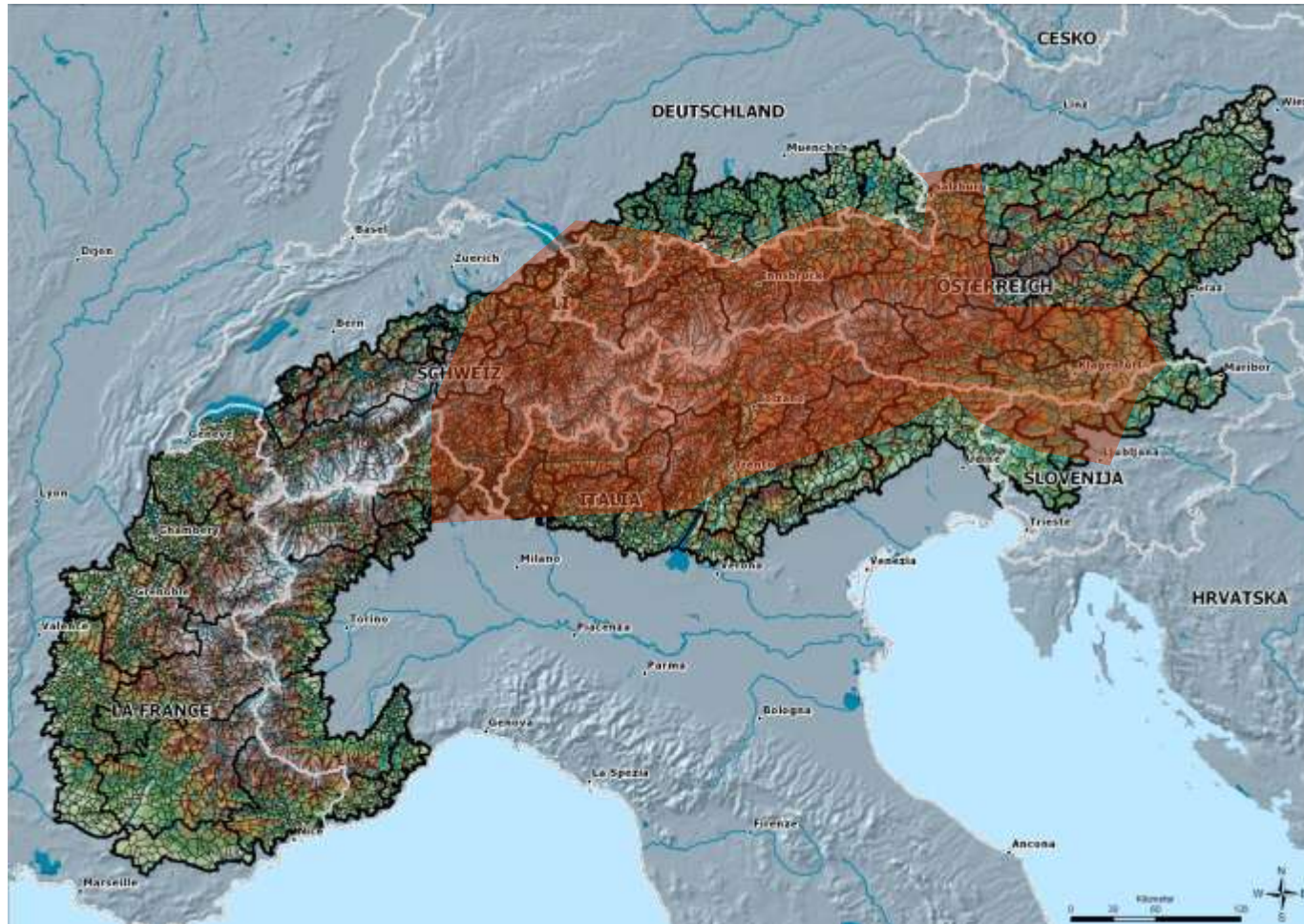
Contents

- Study Region
- Methodological aspects
- Some maps
- Future ??
- Conclusion

Study Region

















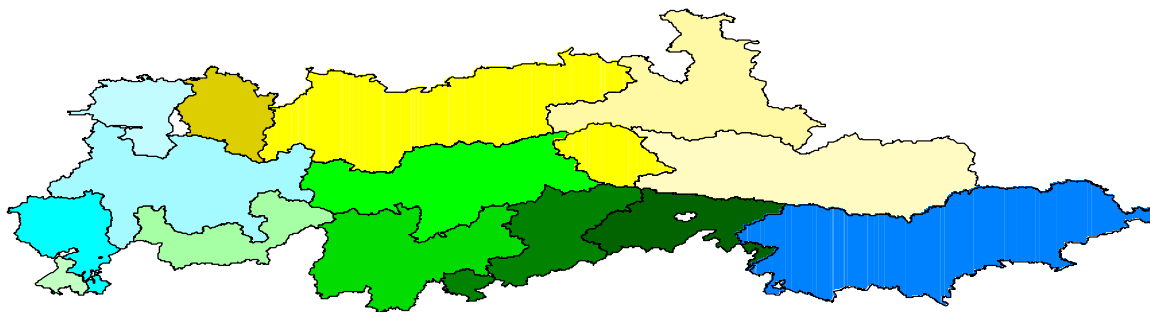
Study Region



Study Region

Population [in 1000]

	Carinthia (560)
	Salzburg (520)
	Tyrol (684)
	Vorarlberg (256)
	St. Gallen - Appenzell (521)
	Graubunden - Glarus (225)
	Ticino (316)
	Varese (113)
	Sondrio (187)
	South Tyrol (465)
	Trentino (483)
	Veneto (232)
	Friuli Venezia Giulia (76)
	Slovenia (1,508)



Total population: 6,200,000

Aim

- Represent geographical distribution of incidence and mortality for main cancer sites taking into account the special situation of alpine geography

Geographical Units

- Structure of Municipalities: Many very small municipalities
- Look for larger units (at least 10,000 Inhabitants, "homogeneous") which reflect the geographical situation
- Austria: grouping of municipalities done by local experts (structure of valleys)
- Italy: sanitary units
- Slovenia: administration units
- Switzerland: administration units
- In the median 20,000 inhabitants

Data

- Population Data:
 - in most areas data were available per year and regional unit
 - some estimation necessary in few areas
- Mortality Data:
 - Austria: official nationwide data
 - Italy: official nationwide data except for South Tyrol (local data)
 - Slovenia: official nationwide data
 - Switzerland: official nationwide data
- Incidence Data:
 - Local Cancer Registries (14 registries)
 - Published in CI5C

Methods: Rates, Smoothing

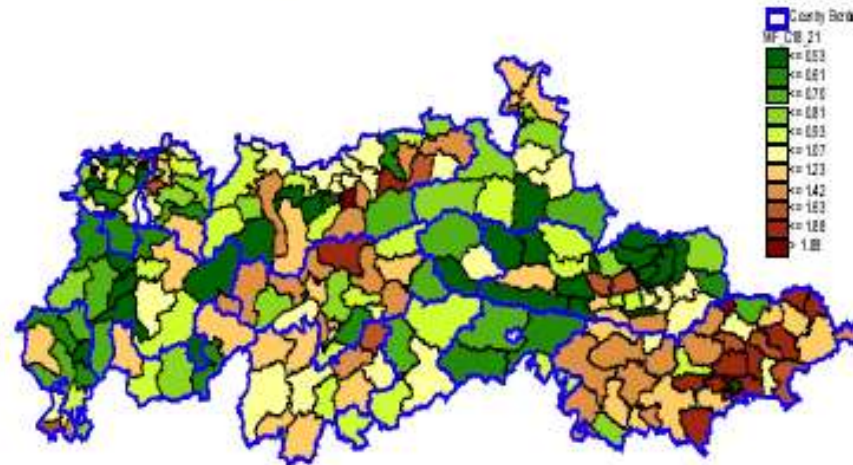
- SMRs resp. SIRs: standard given by whole study region
- Smoothing: BMY method using WinBugs
 - takes adjacency into account → needs connected regions
 - good convergence for all cancer sites
- sensitivity analysis by
 - doing smoothing with large number of iterations for some sites
 - applying another implementation of BMY and contacting a statistical expert

Example Smoothing: Colorectum Female

Mortality Smoothed

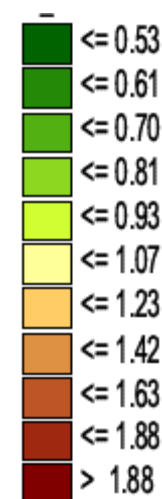


Crude



Rates

- Absolute scale so that colour has the same meaning for every map
(possible for SMR/SIR)
- Colour ranging from green via yellow to brown/red
(depends on quality of screen-shot)
- Only smoothed maps are published



Investigated sites

- All cancer sites except NMSC (and except Prostate)
- Head & Neck & Esophagus & Larynx
- Stomach
- Colon/Rectum
- Liver
- Bronchus
- Breast
- Cervix uteri
- Corpus uteri
- Ovary
- Prostate
- Bladder
- Haematopoetic / Lymphatic System

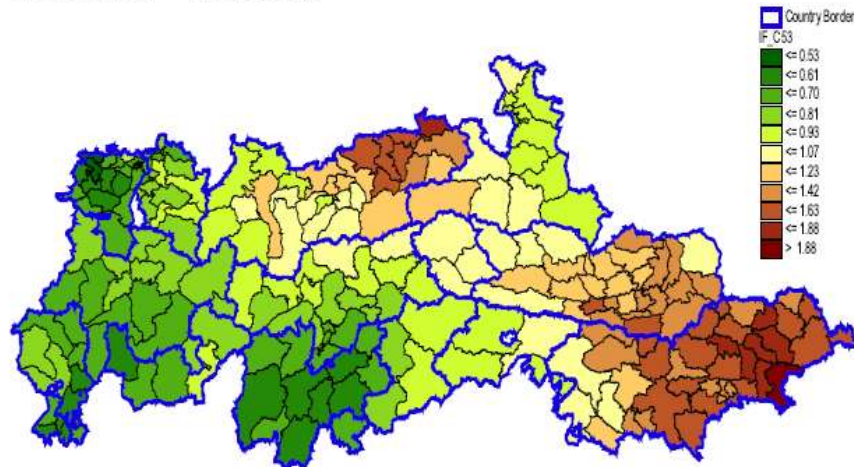
Structure of publication

- Description of Countries (and Registries)
- For every cancer site:
 - Maps
 - Description of Results
 - **Call for Action**

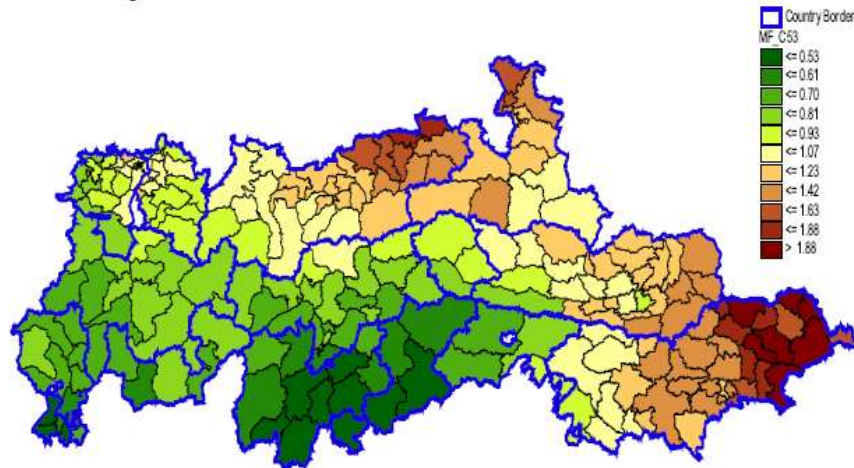
Cervical Cancer

Cervix

Incidence Smoothed



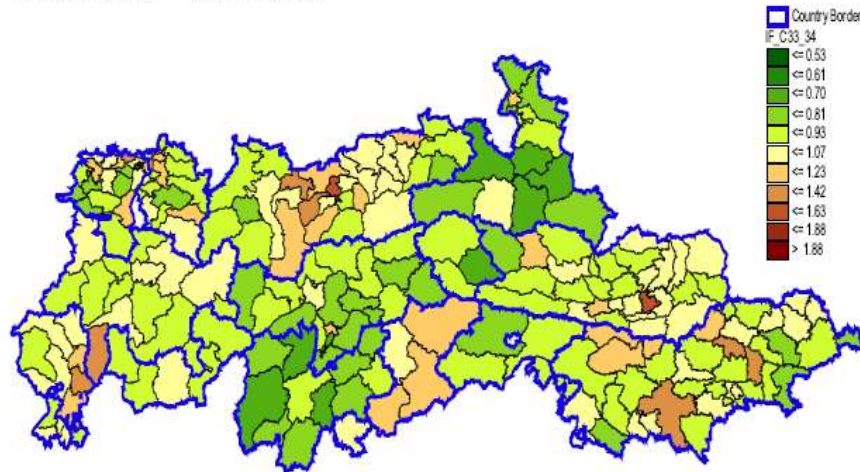
Mortality Smoothed



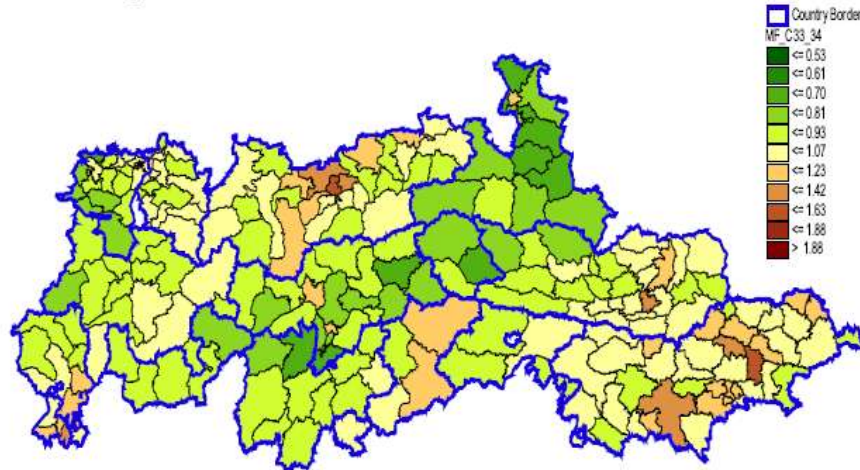
Lung Cancer - Females

Lung Female

Incidence Smoothed



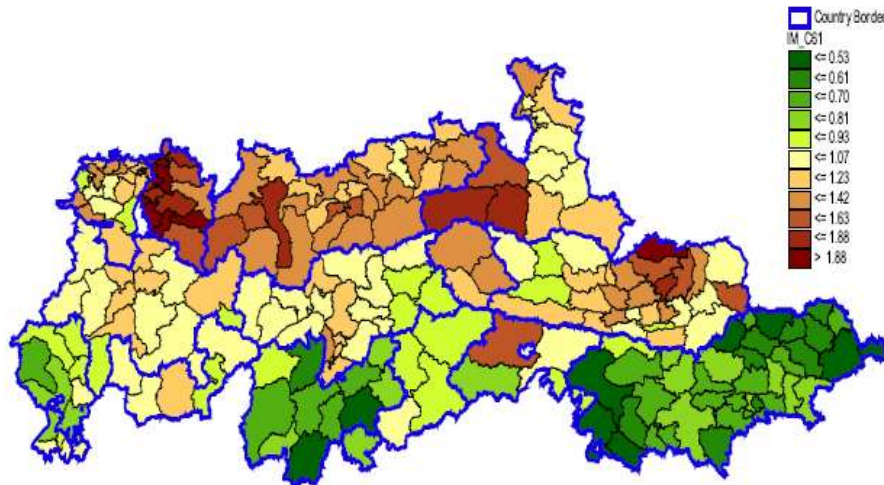
Mortality Smoothed



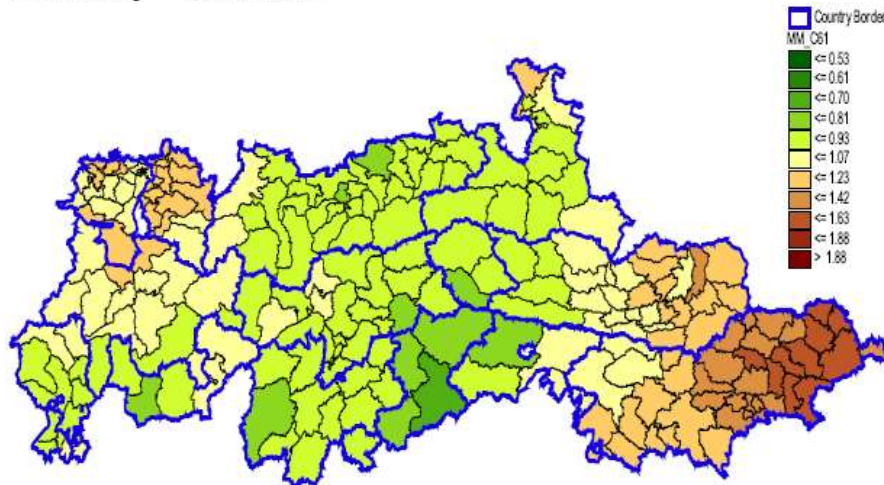
Prostate Cancer

Prostate

Incidence Smoothed



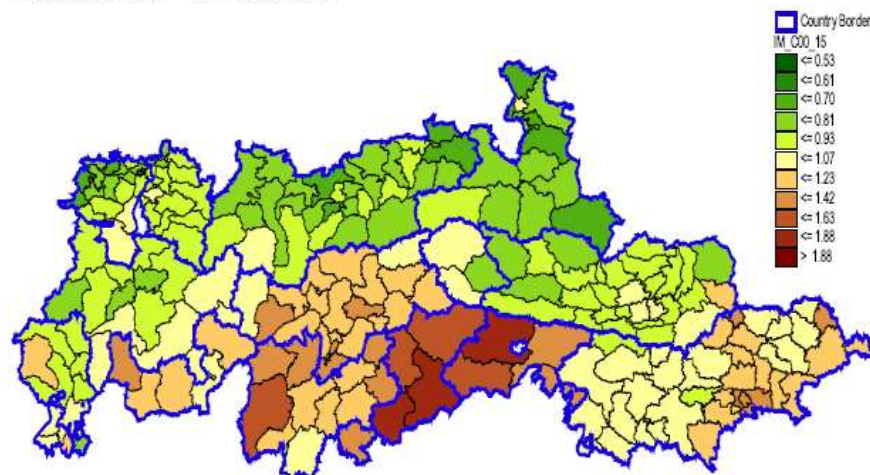
Mortality Smoothed



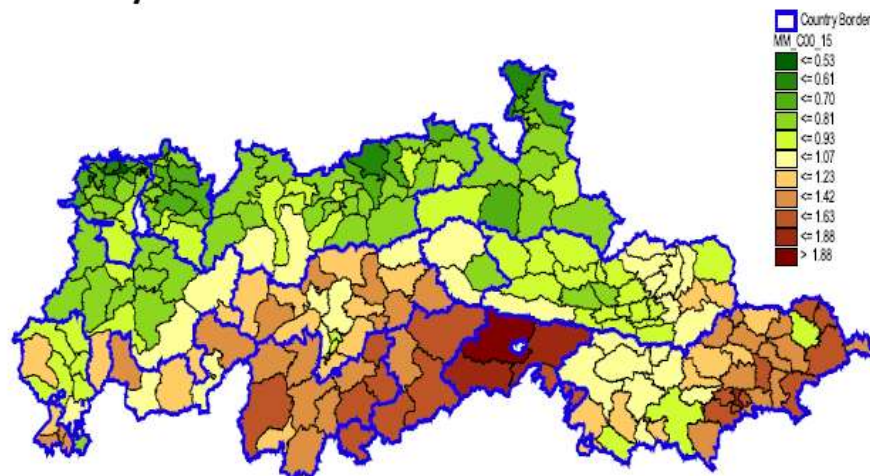
Reason for high incidence risk in the north is PSA testing, has maybe changed in the meanwhile

Head and Neck Cancer - Males

Head and Neck Male Incidence Smoothed



Mortality Smoothed



2006-2010 ???

- What happened with results 2001-2005?
- Problems in 2001-2005:
 - Very low budget
 - Only printing costs
 - Need budget for at least two meetings → Arge Alp ??
- New Methods ??

2006-2011 ???

- New Partners:
 - Iserre: will cooperate, geographically isolated
 - Vallese/Wallis/Valais: will cooperate
 - Bavaria: will not cooperate (lack of resources)
- Timeliness Incidence Data 2006-2010:
 - Ready: 5/13 registries
 - Until end of 2013: 4/13 registries
 - After end of 2013: 4/13 registries
- Actions:
 - From a public health perspective, more weight on actions

Summary

- The geographical units seem well able to describe spacial distribution
- Standard defined by study region seems appropriate choice
- The smoothing methods is applicable and produces stable results
- Prostate cancer is good example for the need for careful interpretation
- If we observe areas with higher risk, then there is a tendency to higher risk in the south
 - one exception is cervical cancer
 - Recommendation for politicians
- Should we go on forward to a next edition? – main problem is timeliness!!

Thank you for your attention
Mille grazie per vostra attenzione

