

# *Development of a Circumpolar Health Observatory*

Kue Young, MD, FRCPC, Dphil

Professor and TransCanada Pipelines Chair  
Dalla Lana School of Public Health  
University of Toronto, Canada

Workshop on health data  
Inuvialuit Regional Corporation  
Yellowknife, 2010

# *Contents of presentation*

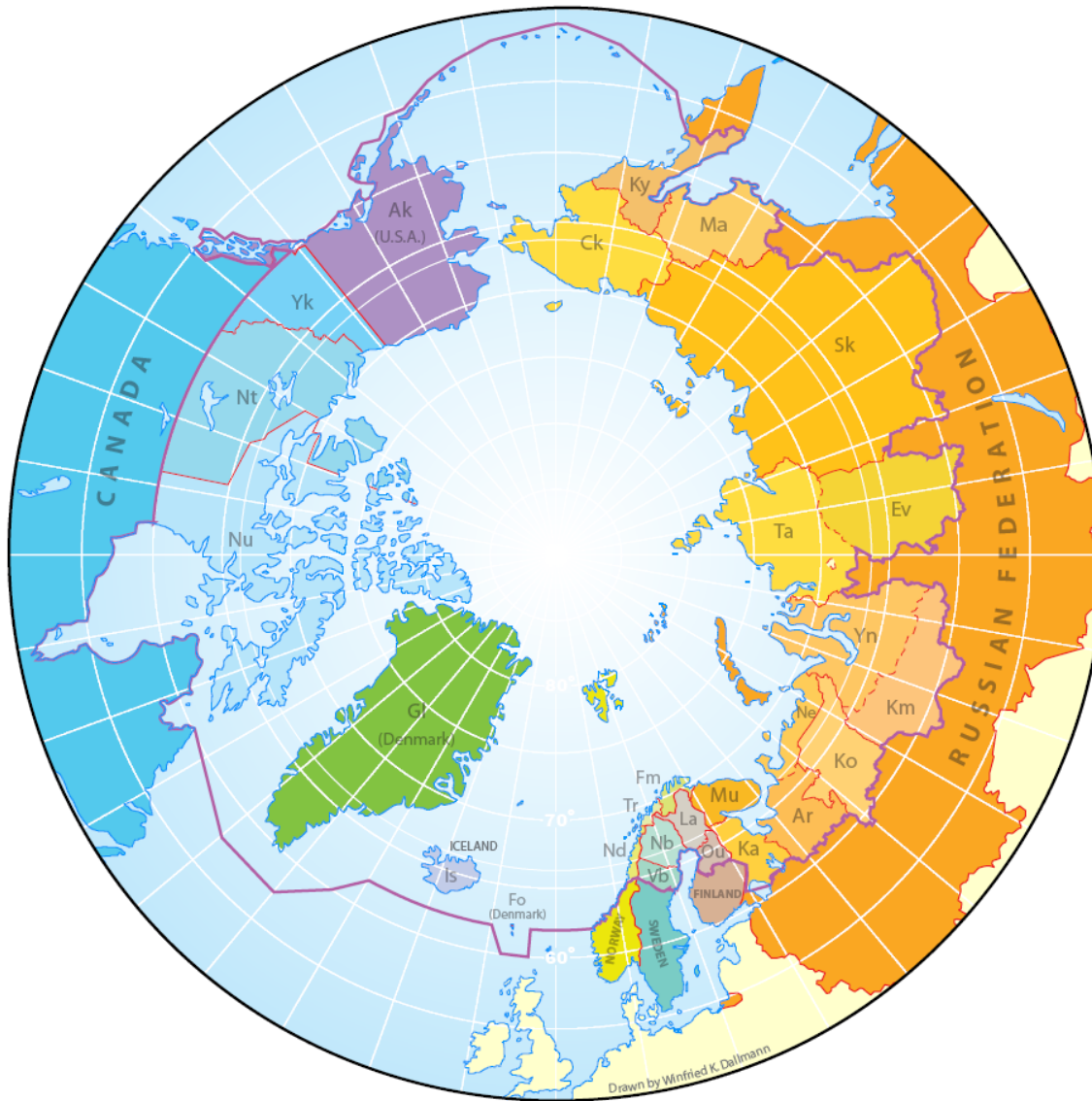


- Development of a Circumpolar Health Observatory [CircHOB] – a program of Institute for Circumpolar Health Research, Yellowknife, and University of Toronto, Canada
- Application of Observatory data to describing and understanding health disparities among circumpolar regions and populations

# *What is CircHOB and what can we use it for?*

- An international circumpolar collaborative health information system
- Systematic, standardized, consistent methods in data collection, analysis, and reporting
- Monitors trends and patterns in health status, health determinants, and health care
- Provides quantitative evidence for planning and evaluation of health programs and services
- Population-based, aggregated by administrative regions in all circumpolar countries

- Ongoing web-based resource -> generate health assessment reports for regional/national/international governments and indigenous people's organizations on request
- Searchable and interactive database to be developed [[www.circhob.circumpolarhealth.org](http://www.circhob.circumpolarhealth.org)]
- User-generated tables based on region, year, indicator
- SAON Inventory of Networks
- Arctic Council's Sustainable Development Working Group project [under consideration]



- [US] United States
- [Ak] Alaska
- [CA] Canada
- [Yk] Yukon
- [Nt] Northwest Territories
- [Nu] Nunavut
- [DK] Denmark
- [Gl] Greenland
- [Fo] Faroe Islands
- [IS] Iceland
- [NO] Norway
- [Nd] Nordland
- [Tr] Troms
- [Fm] Finnmark
- [SE] Sweden
- [Vb] Västerbotten
- [Nb] Norrbotten
- [FI] Finland
- [Ou] Oulu
- [La] Lappe
- [RU] Russian Federation
- [Mu] Murmansk Oblast
- [Ka] Kareliya Republic
- [Ar] Arkhangelsk Oblast
- [Ne] Nenets AO
- [Ko] Komi Republic
- [Yn] Yamalo-Nenets AO
- [Km] Khanty-Mansi AO
- [Tm] Taymyr AO
- [Ev] Evenki AO
- [Sk] Sakha Republic
- [Ma] Magadan Oblast
- [Ky] Koryak AO
- [Ck] Chukotka AO

***Circumpolar countries and regions***

# Data Sources



nomesco



Statistics  
Canada

ФЕДЕРАЛЬНАЯ СЛУЖБА  
ГОСУДАРСТВЕННОЙ СТАТИСТИКИ



**Eurostat**

National Center for Health Statistics.



**Statistiska centralbyrån**  
Statistics Sweden

ALASKA CENTER FOR  
HEALTH DATA & STATISTICS



**Statistisk sentralbyrå**  
Statistics Norway

norgeshelsa på nett



**Sundhedsstyrelsen**

National Board of Health



**Hagstofa Íslands**

**STAKES**

Statistika ja terveysalan tutkimus- ja rekrytintietokeskus

**Tilastokeskus**

NAMMINERSORNERULLUTIK OQARTUSSAT  
GRØNLANDS HJEMMESTYRE

**Grønlands Statistik**

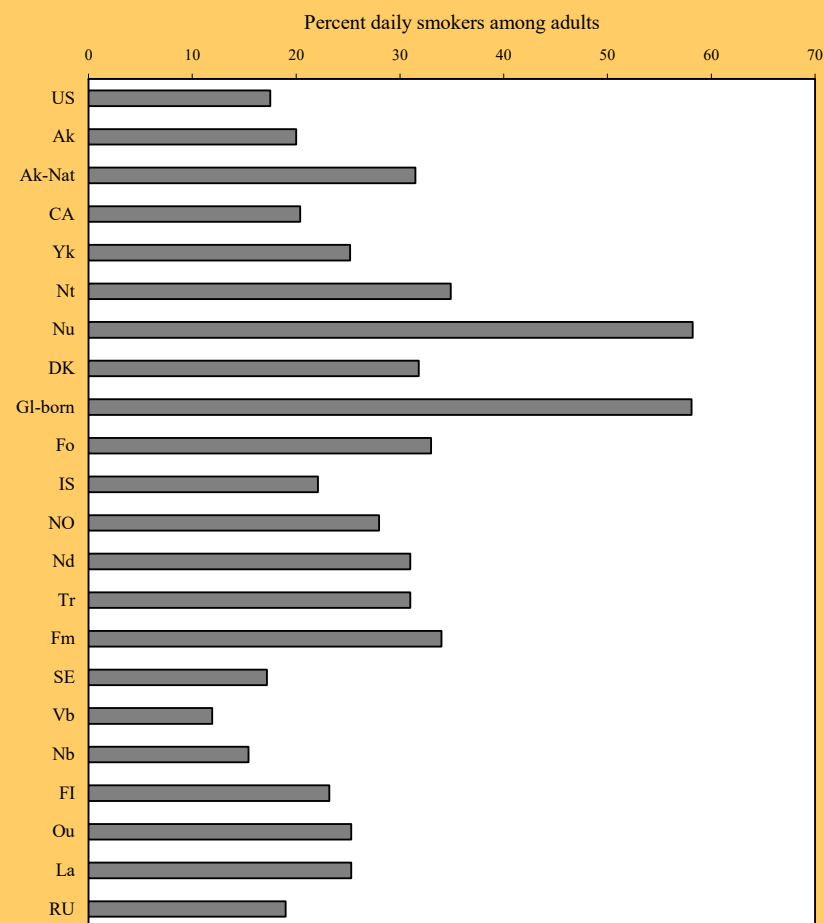


# *Types of data monitored*

- ***Population***: size, age-sex distribution, density, % indigenous people, % urban
- ***Fertility***: crude, age-specific and total fertility rate; births by mother's age
- ***Mortality***: crude, age-sex-specific mortality rates; life expectancy; infant mortality; age-standardized mortality rates by cause
- ***Reproductive outcome***: perinatal mortality; livebirths by birthweight and gestational age
- ***Disease incidence***: tuberculosis, STDs, cancer
- ***Health related behaviours***: smoking, physical activity
- ***Health care***: health care expenditures; hospital beds; health care professionals

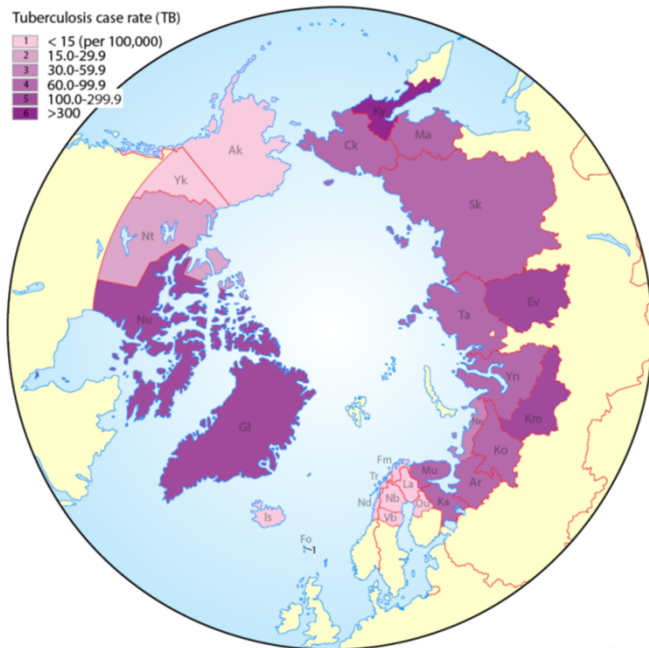
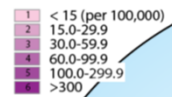
**Table A-1. Annual Mean Population**

| Country/Region          | 2000             | 2001             | 2002             | 2003             | 2004             |
|-------------------------|------------------|------------------|------------------|------------------|------------------|
| United States           | 282,193,477      | 285,107,923      | 287,984,799      | 290,850,005      | 293,656,842      |
| Alaska                  | 627,500          | 632,249          | 640,699          | 648,510          | 657,755          |
| - Alaska Natives        | 107,901          | 108,716          | 109,975          | 110,899          | 112,446          |
| Canada                  | 30,689,035       | 31,021,251       | 31,372,587       | 31,676,077       | 31,989,454       |
| Yukon                   | 30,421           | 30,129           | 30,137           | 30,574           | 30,896           |
| Northwest Territories   | 40,499           | 40,822           | 41,489           | 42,231           | 42,798           |
| Nunavut                 | 27,500           | 28,121           | 28,739           | 29,165           | 29,633           |
| <i>Northern Canada</i>  | <i>98,420</i>    | <i>99,072</i>    | <i>100,365</i>   | <i>101,970</i>   | <i>103,327</i>   |
| Denmark                 | 5,337,344        | 5,355,082        | 5,374,255        | 5,387,174        | 5,401,177        |
| Greenland               | 56,201           | 56,394           | 56,609           | 56,765           | 56,912           |
| - Born in Greenland     | 49,504           | 49,710           | 49,869           | 50,019           | 50,190           |
| Faroe Islands           | 45,749           | 46,553           | 47,315           | 47,923           | 48,258           |
| Iceland                 | 281,154          | 285,054          | 287,559          | 289,272          | 292,587          |
| Norway                  | 4,490,967        | 4,513,751        | 4,538,159        | 4,564,855        | 4,591,910        |
| Nordland                | 238,702          | 237,899          | 237,227          | 237,004          | 236,941          |
| Troms                   | 151,469          | 151,725          | 151,960          | 152,438          | 152,685          |
| Finnmark                | 74,073           | 73,910           | 73,623           | 73,362           | 73,142           |
| <i>Northern Norway</i>  | <i>464,244</i>   | <i>463,534</i>   | <i>462,810</i>   | <i>462,804</i>   | <i>462,768</i>   |
| Sweden                  | 8,872,110        | 8,895,963        | 8,924,960        | 8,958,231        | 8,993,534        |
| Västerbotten            | 256,177          | 255,231          | 255,025          | 255,594          | 256,417          |
| Norrbottn               | 257,168          | 255,488          | 254,185          | 253,255          | 252,731          |
| <i>Northern Sweden</i>  | <i>513,345</i>   | <i>510,719</i>   | <i>509,210</i>   | <i>508,849</i>   | <i>509,148</i>   |
| Finland                 | 5,176,209        | 5,188,008        | 5,200,598        | 5,213,014        | 5,228,172        |
| Oulu                    | 454,302          | 455,819          | 456,924          | 457,925          | 459,699          |
| Lappi                   | 193,060          | 190,528          | 188,533          | 187,347          | 186,680          |
| <i>Northern Finland</i> | <i>647,362</i>   | <i>646,347</i>   | <i>645,457</i>   | <i>645,272</i>   | <i>646,379</i>   |
| Russian Federation      | 146,596,870      | 145,976,473      | 145,306,492      | 144,565,928      | 143,821,212      |
| Murmansk Oblast         | 931,969          | 914,305          | 897,772          | 884,906          | 876,393          |
| Kareliya Republic       | 732,138          | 725,176          | 718,376          | 711,955          | 705,888          |
| Arkhangelsk Oblast      | 1,379,726        | 1,359,783        | 1,341,552        | 1,325,289        | 1,311,233        |
| - Nenets AO             | 41,053           | 40,914           | 41,298           | 41,766           | 41,893           |
| Komi Republic           | 1,050,377        | 1,036,262        | 1,022,842        | 1,010,873        | 1,001,073        |
| Yamalo-Nenets AO        | 497,282          | 500,696          | 505,861          | 511,849          | 519,232          |
| Khanty-Mansi AO         | 1,371,548        | 1,397,658        | 1,424,798        | 1,447,119        | 1,462,760        |
| Taymyr AO               | 38,257           | 38,705           | 39,419           | 39,557           | 39,407           |
| Evenki AO               | 18,241           | 17,882           | 17,699           | 17,574           | 17,461           |
| Sakha Republic          | 959,993          | 954,478          | 950,057          | 948,802          | 949,818          |
| Magadan Oblast          | 197,960          | 190,582          | 184,525          | 180,086          | 176,512          |
| Koryak AO               | 26,238           | 25,758           | 25,325           | 24,656           | 24,094           |
| Chukotka AO             | 59,574           | 56,422           | 54,223           | 52,274           | 51,059           |
| <i>Northern Russia</i>  | <i>7,263,303</i> | <i>7,217,707</i> | <i>7,182,449</i> | <i>7,154,940</i> | <i>7,134,930</i> |
| Total Northern Regions  | 9,997,278        | 9,957,629        | 9,932,473        | 9,916,305        | 9,912,064        |

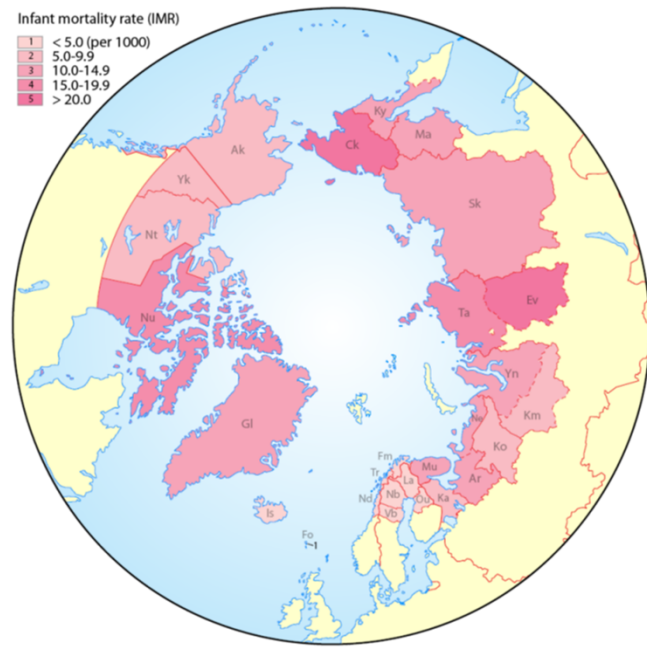
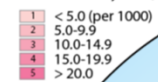
**Charts****Data tables**



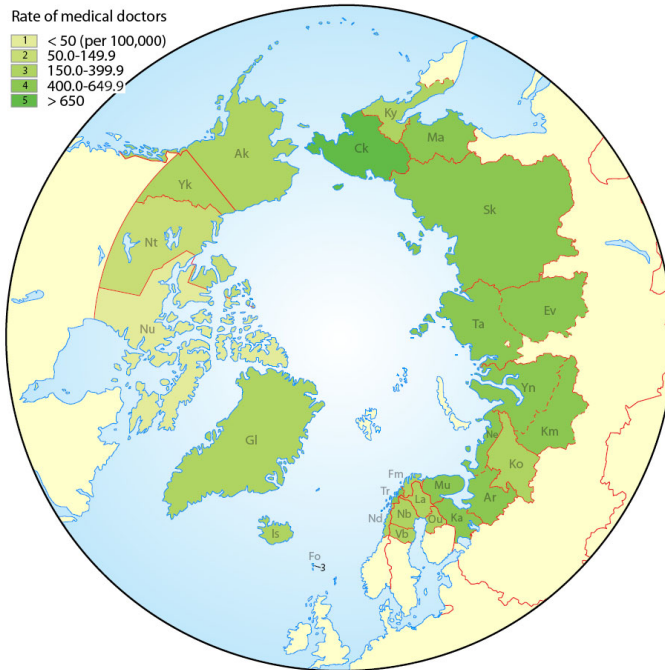
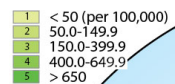
Tuberculosis case rate (TB)



Infant mortality rate (IMR)

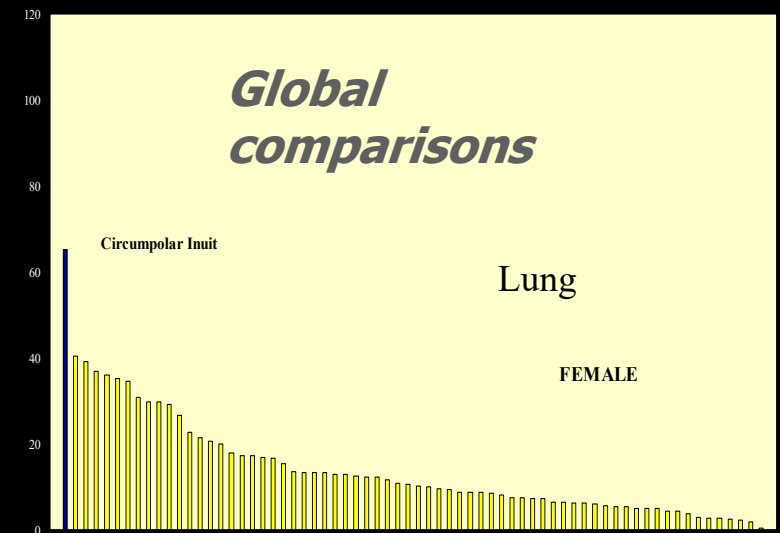
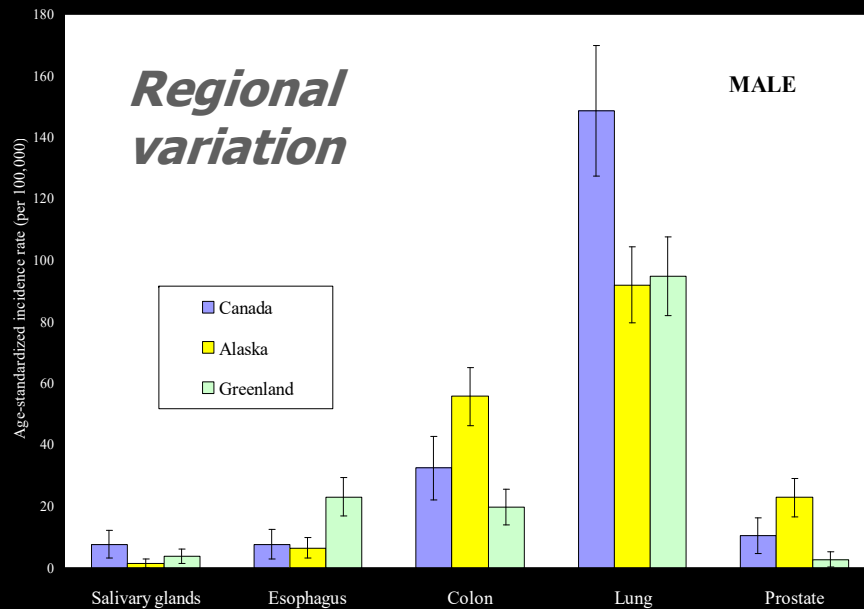
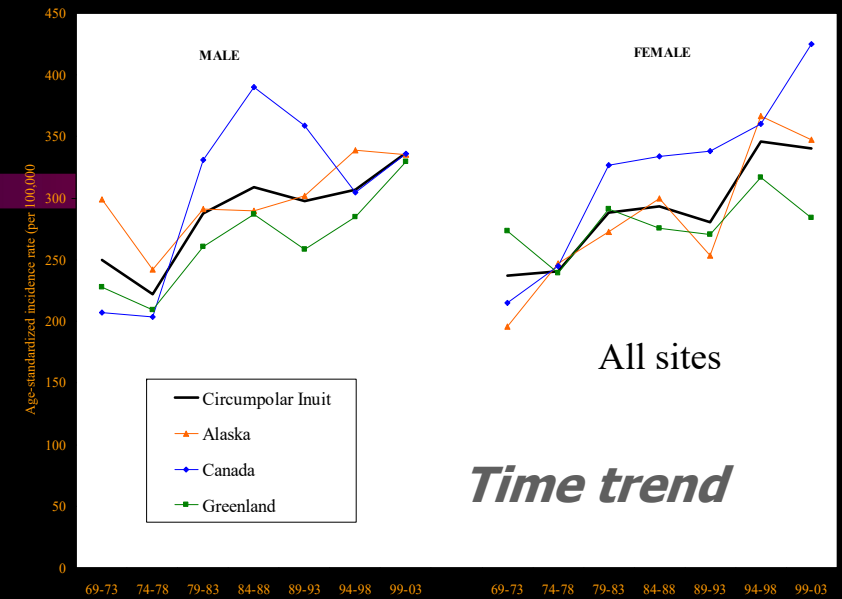
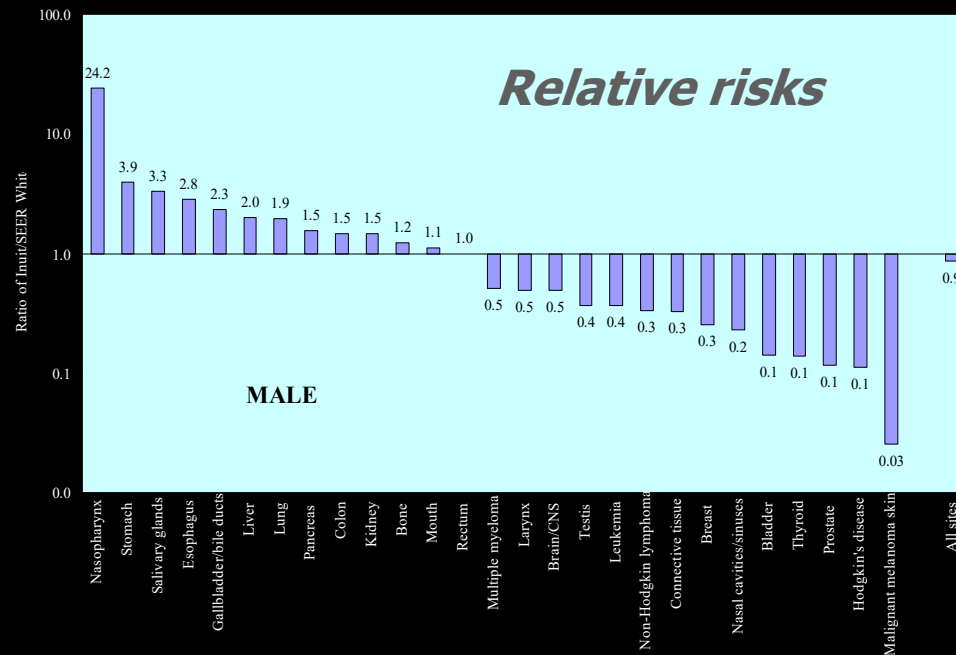


Rate of medical doctors

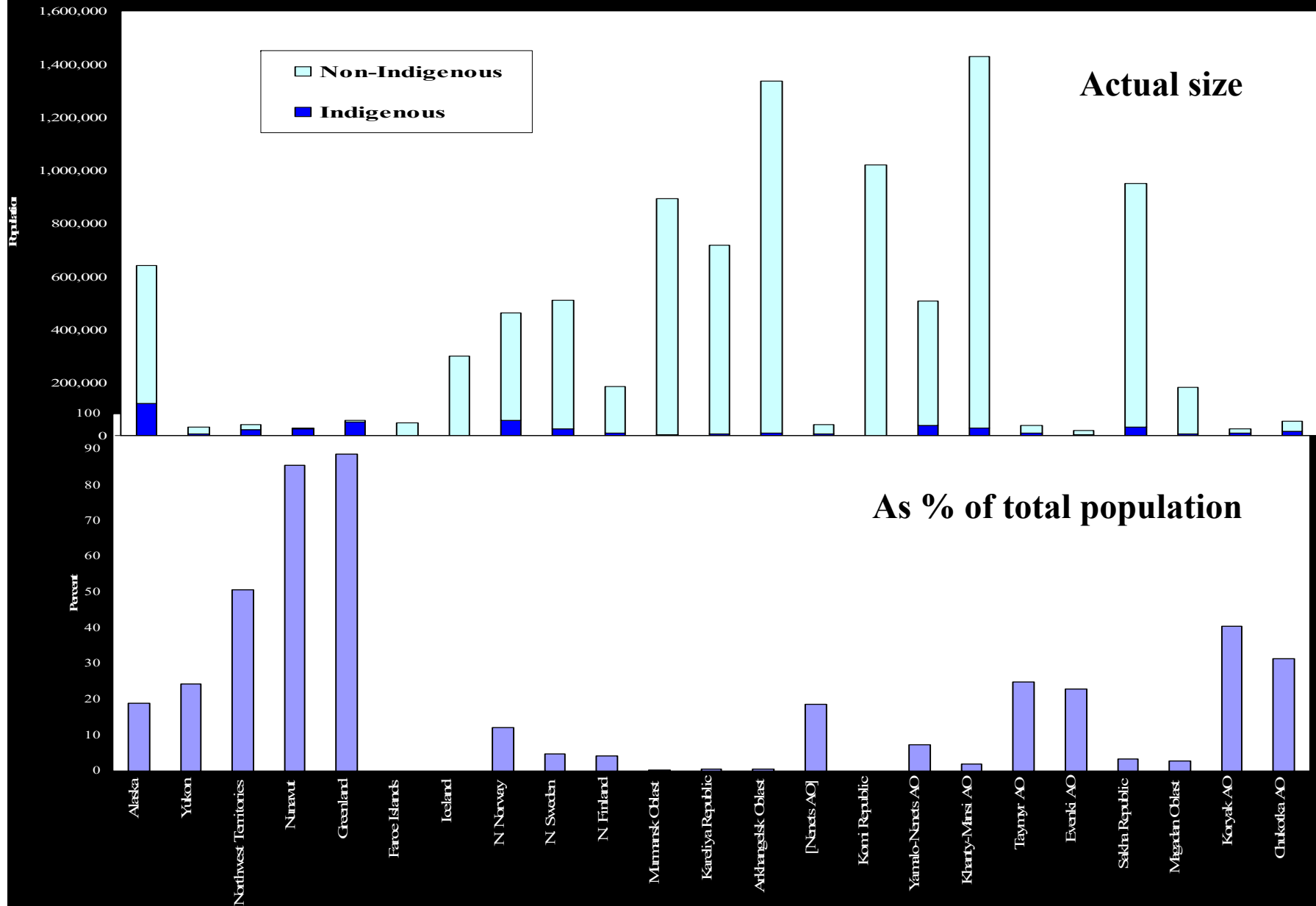


*Maps*

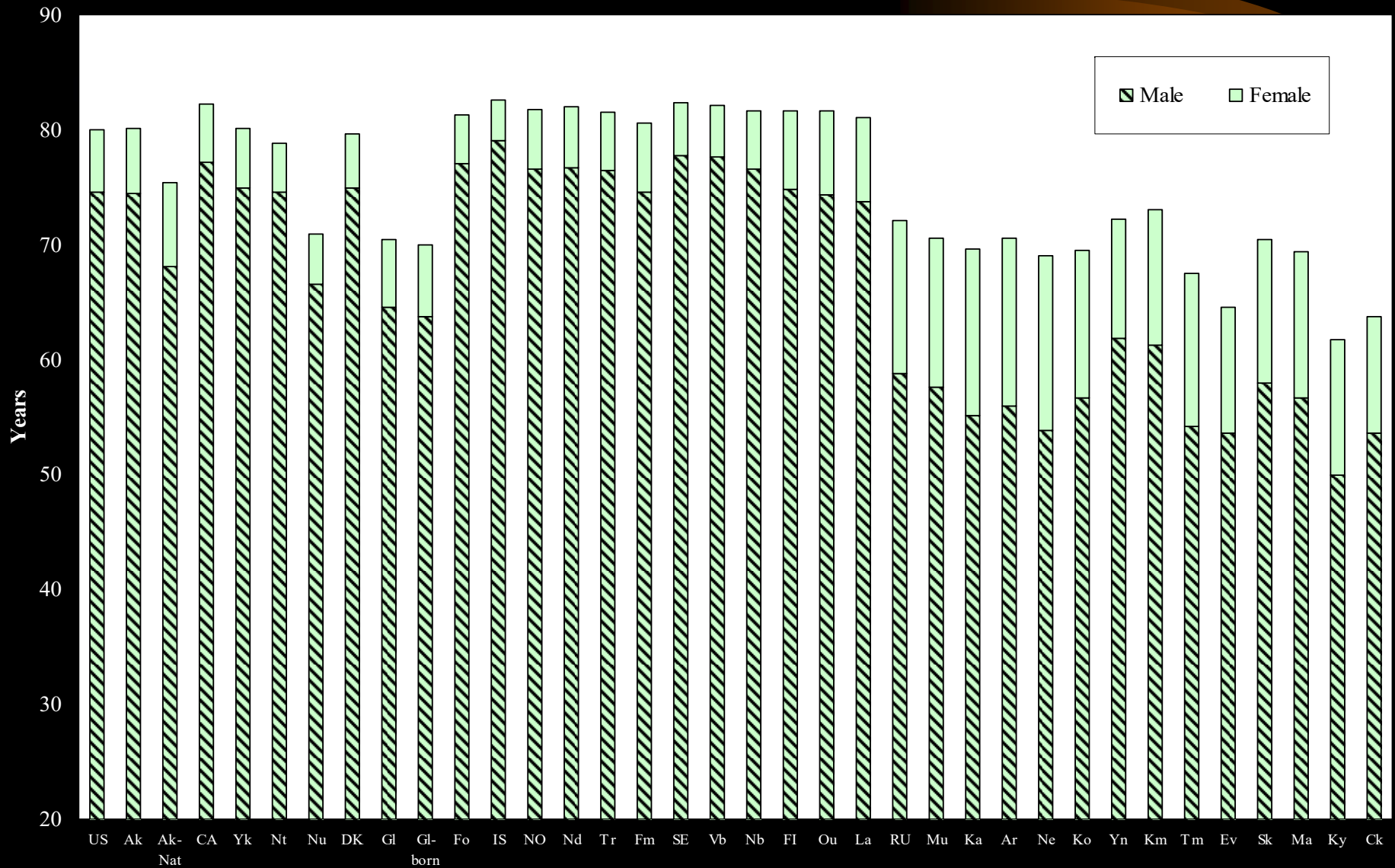
# Circumpolar Inuit Cancer Review



# Indigenous peoples

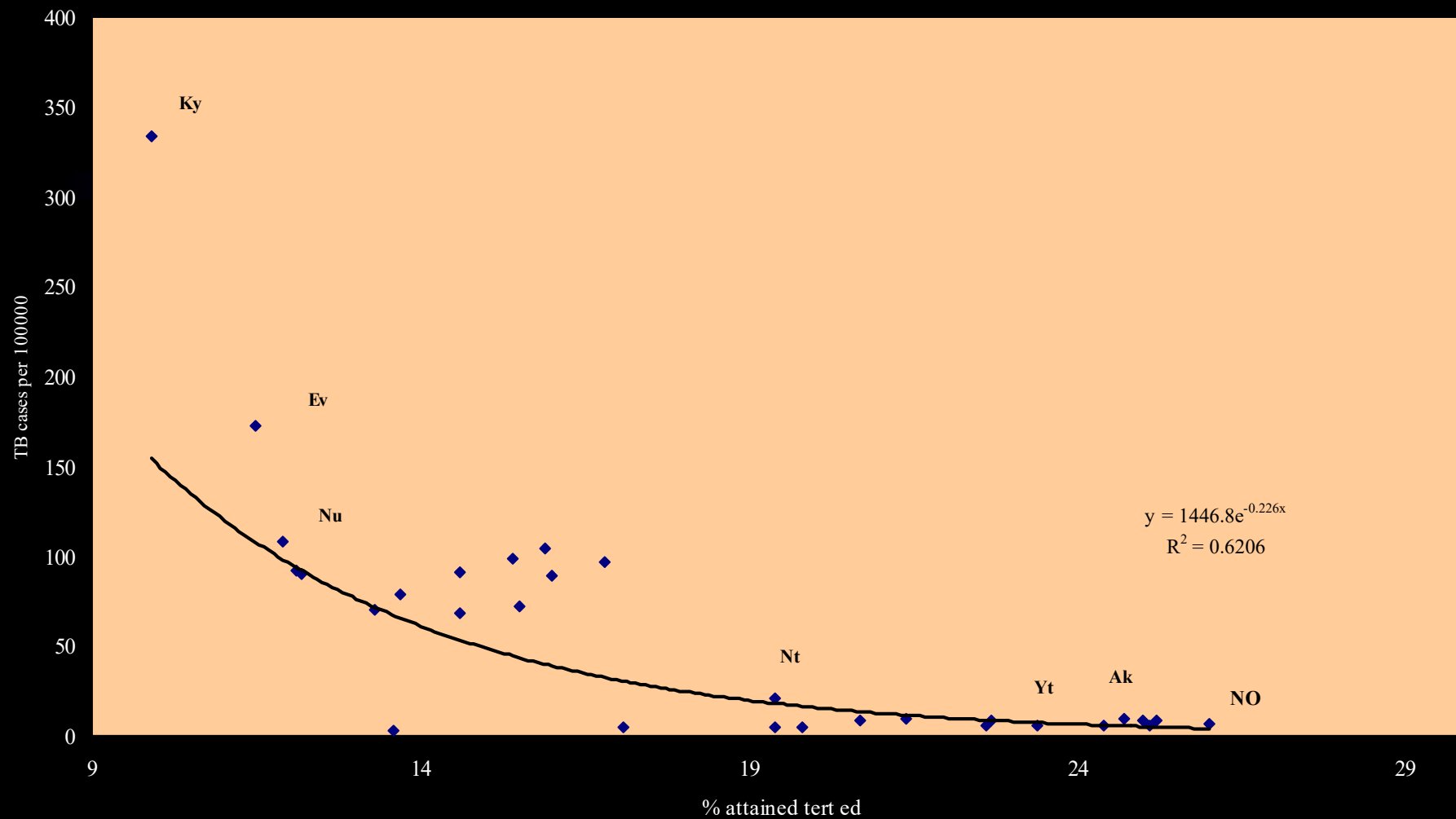


# *Life expectancy at birth*



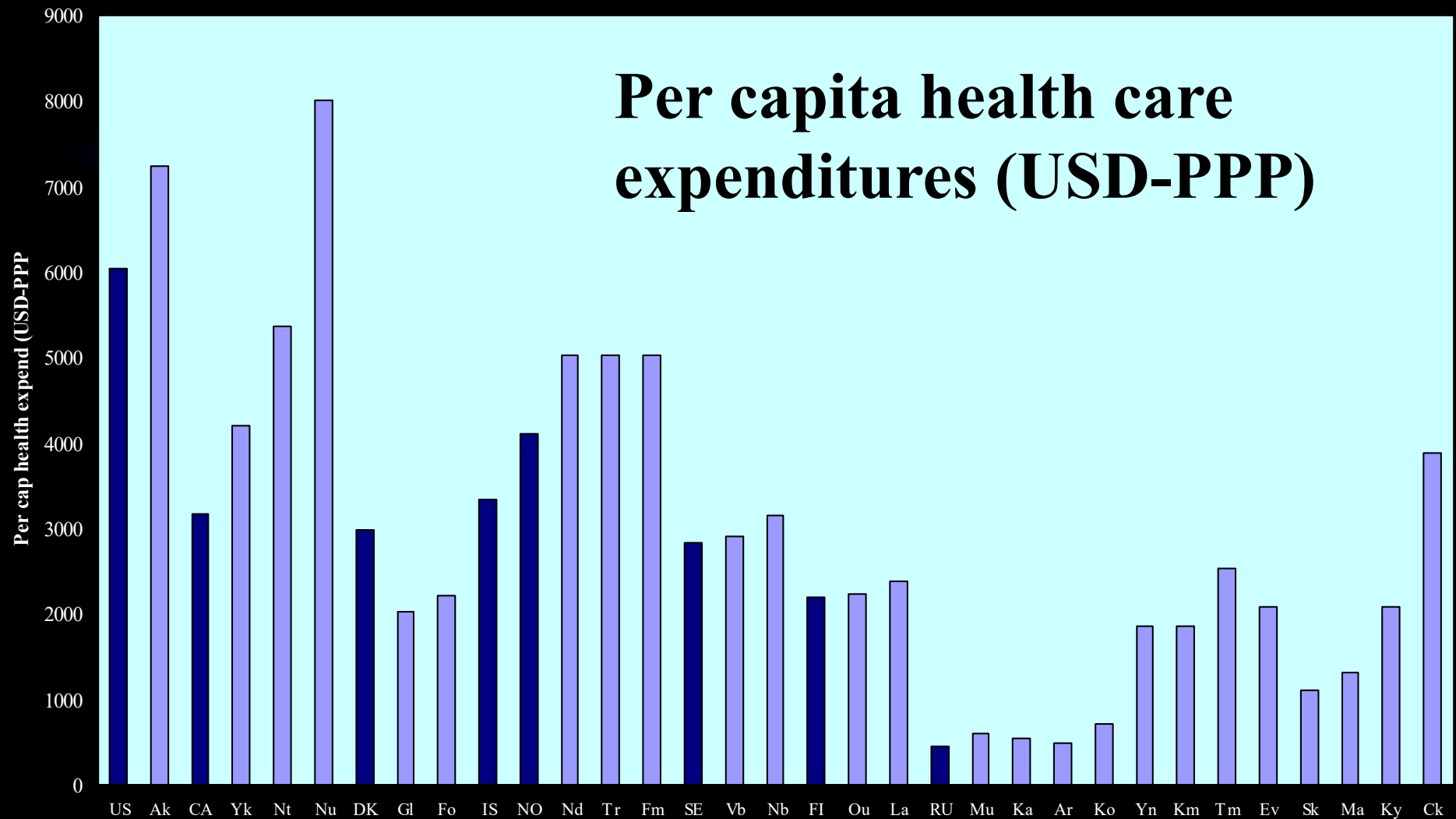
# *Patterns of health disparities*

- In Nordic countries, little/no difference between North and South, or between Sami and national populations.
- Greenland and northern Canada, especially Nunavut - substantial disparities with Denmark and Canada.
- State of Alaska not much different from the all-race USA rates but Alaska Natives within Alaska generally fare much worse than the State average.
- There is a health and demographic crisis in Russia—certain northern regions are at particularly high risk, within a country that is worst among all circumpolar countries

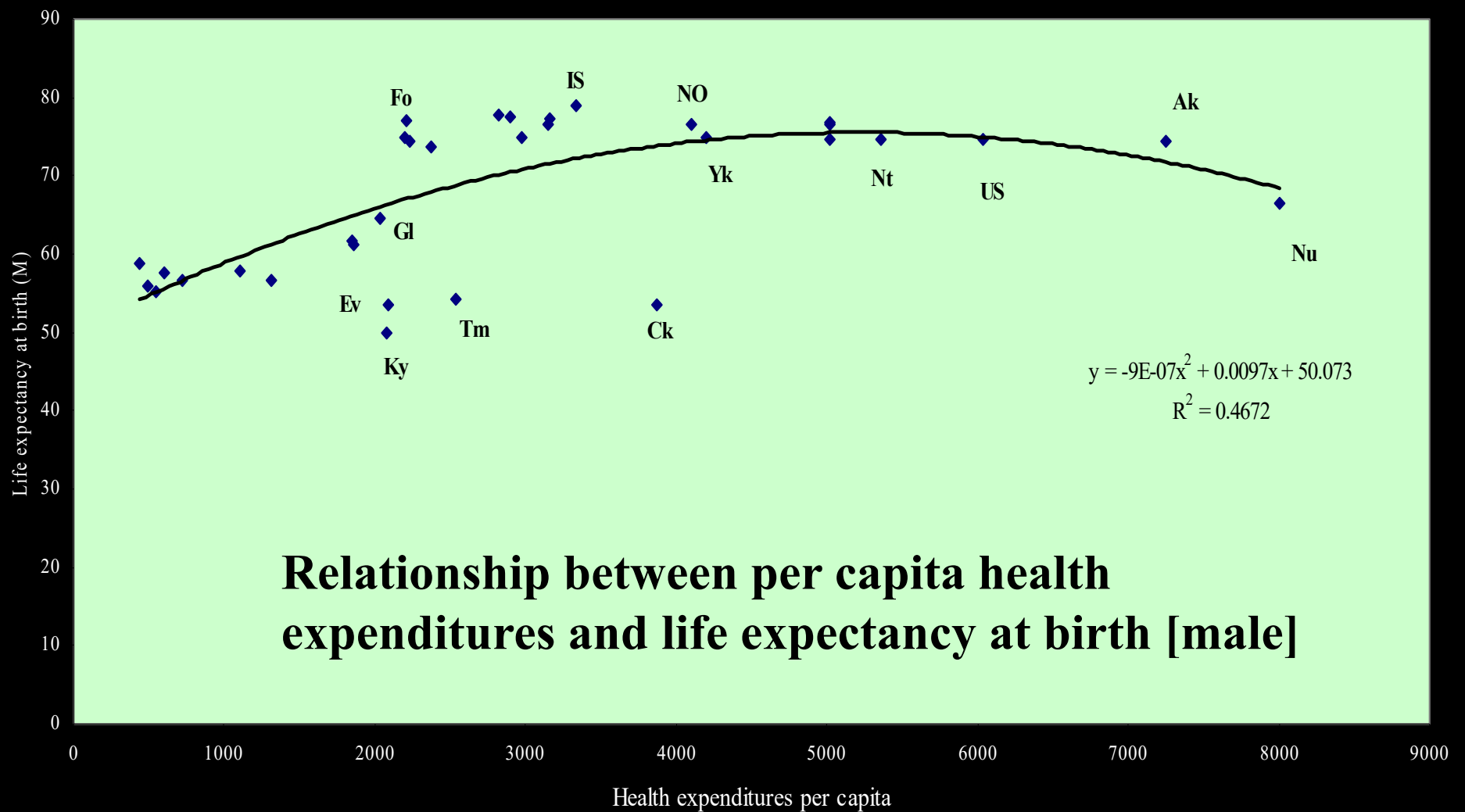


**Relationship between % adults who attained tertiary education and TB incidence**

# Per capita health care expenditures (USD-PPP)

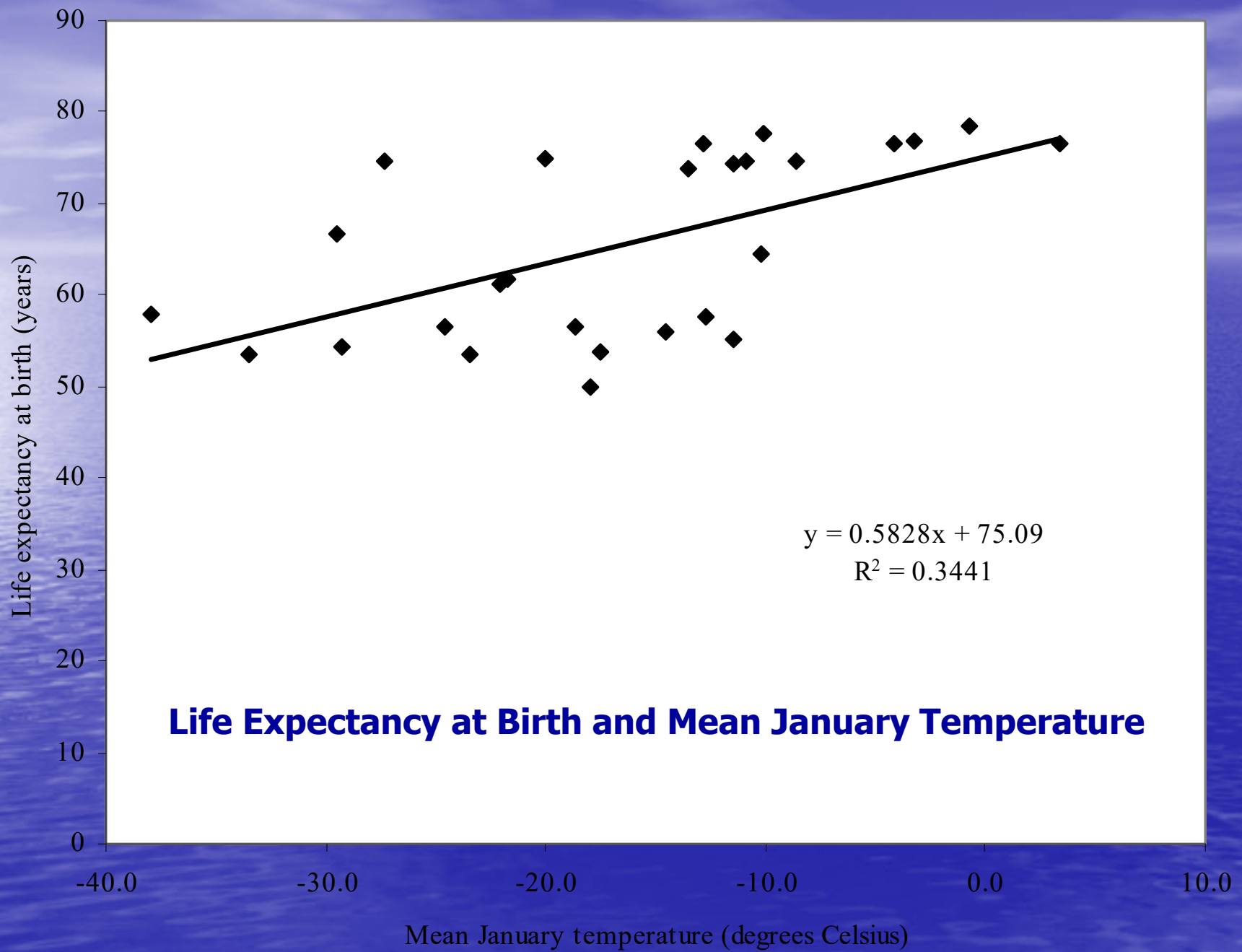


■ = countries; ■ = northern regions



**Relationship between per capita health expenditures and life expectancy at birth [male]**







*Thank You!*