

Exercises

The course contains 2 exercise sessions (45 minutes each) and 3 group sessions (2 hours each). For the group sessions you will be assigned a group and a room containing a computer. The exercises can be performed individually or in small groups and you will require nothing more than a hand calculator. You are free to sit anywhere around Haga Forum during the exercise sessions. Faculty members will circulate around Haga Forum to assist course participants and there will be a short review of the exercise in the lecture after lunch.

Exercise session I – Standardisation, Tuesday 19 January, 11:15-12:00

The 3 following pages contain tables containing age-specific numbers of cases and person-years for prostate cancer in Denmark, Finland, and Sweden (1 table for each country). There are some gaps in the table. Your task is to complete these gaps and then estimate the crude rate and age-specific rates. You will then compare incidence in the study population to incidence in Denmark by comparing directly standardized rates (calculate the SRR) and indirect standardization (calculate the SIR).

The exercise can be performed using a pocket calculator although if you have access to a computer you may, if you choose, download exercise1.xls from the course web site and perform the exercise in a spreadsheet program (e.g., MS Excel).

Exercise II – Pattern recognition, Wednesday 20 January, 11:15-12:00

For this exercise it is suggested that you work in groups of 2. You have been provided with graphs of time trends in cancer rates and your task is to identify patterns in these graphs considering factors such as changes in the prevalence of risk factors, data quality, interventions, etc.

Exercise on rates and standardisation									
Denmark (2001) Prostate cancer incidence									
age	cases(d_i) 2001	person-years 2001	age-spec. rate (r_i)	st. pop (w_i)	r_iw_i	t_i	r_it_i	r_i(denmark)	x pyar
0-4	0	172501	0.00	8000	0.00	5	0.00	0	0
5-9	0	179152	0.00	7000	0.00	5	0.00	0	0
10-14	0	161068	0.00	7000	0.00	5	0.00	0	0
15-19	0	142934		7000	0.00	5	0.00	0	0
20-24	0	161401	0.00	7000	0.00	5	0.00	0	0
25-29	0	192443	0.00	7000	0.00	5	0.00	0	0
30-34	0	202148	0.00	7000	0.00	5	0.00	0	0
35-39	0	214021		7000	0.00		0.00	0	0
40-44	1	191388	0.52	7000	3657.49	5	2.61	100000	
45-49	7	185451	3.77	7000	26422.07	5	18.87	700000	
50-54	36	192744	18.68	7000	130743.37	5	93.39	3600000	
55-59	125	186431		6000		5		0	
60-64	197	132810	148.33	5000		5		19700000	
65-69	313	105714	296.08	4000	1184327.53	5	1480.41	31300000	
70-74	403	87406	461.07	3000	1383200.24	5	2305.33	40300000	
75-79	400	68137	587.05	2000	1174105.11			40000000	
80-84	308	43053	715.40	1000	715397.30			30800000	
85+	207	28447		1000	0.00			0	
Total	1997	2647249		100000	4617853.111	70	3900.62	166500000	
Crude Rate									
ASR (E) =	Age-standardised rate (using European standard population)								
TASR (50-74) =	Truncated age-standardised rate (using European standard population)								
cumulative rate (0-74) =	%								
cumulative risk (0-74) =	%								
SRR (all ages) =	Standardised rate ratio comparing Study population (Denmark in this case) to Denmark								
O	Observed number of cases								
E	Expected number of cases (if same age-specific rates as Denmark)								
SIR (all ages)	Standardised incidence ratio comparing Study population (Denmark in this case) to Denmark								

