

A preliminary analysis of the trends in Breast Cancer, 1996-2007

September 18, 2015

Steps of Analyses and what was done

In this paper, we show a few spaghetti plots where we plot the time trends of breast cancer among women aged 45-85+ in 16 industrialised countries. These countries were: Australia (Queensland), Canada, Denmark, Finland, France, Iceland, Israel (Jews), Italy, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, UK (Million Women's Study), and the United States (SEER 9 Region data). Data for breast cancer were abstracted for the years 1996 - 2007 from the IARC/ci5 database for age standardised incidence rates for women aged 45-85+ years. We initially start with the overall spaghetti plots for the entire countries that had peak HRT in different years, and then explode the plots for two time points, one for those countries that still had peak HRT usage in the years 1996-1998, and then those countries that had peak HRT usage in 2001 and afterwards.

The following chart shows the names of the countries and the year when they reached peak HRT usage

##	Country	peakhrtuseyr
## 1	Australia (QLD)	2001
## 2	Canada	2002
## 3	Denmark	2003
## 4	Finland	2003
## 5	France	2001
## 6	Iceland	2001
## 7	Israel	2001
## 8	Italy	2001
## 9	Netherlands	1997
## 10	New Zealand	1997
## 11	Norway	2001
## 12	Spain* (which)	1998
## 13	Sweden*	1999
## 14	Switzerland*	1996
## 15	UKmillion Womens Study	1998

Initially, we show the spaghetti plot for all countries in the data.

ot of the incidence rates of Breast Cancer among women 45–85+, in all coun

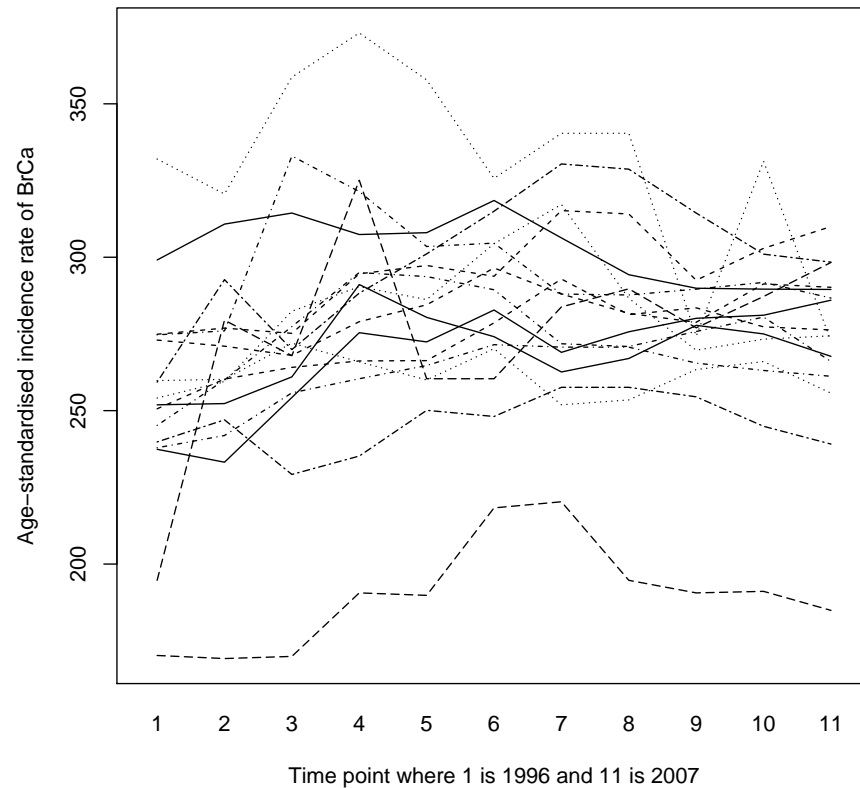


Figure 1. Age-standardised breast cancer incidence rate among women aged 45-85+ years, all countries, 1996-2007 data

Visual inspection of this graph suggests two peaks in the plot, one around 2000 and one around 2004-2005 in breast cancer and thereafter there is a drop as particularly after the 2001 and then again in 2004. To characterise this further, we explode this graph into two subgroups, one where peak HRT was reached around 1996-1998 (or at least earlier than 2000) and one where peak HRT usage was reached after 2000) and examine the two graphs. We found six such countries.

ce rates of Breast Cancer among women 45–85+, in countries where peak H

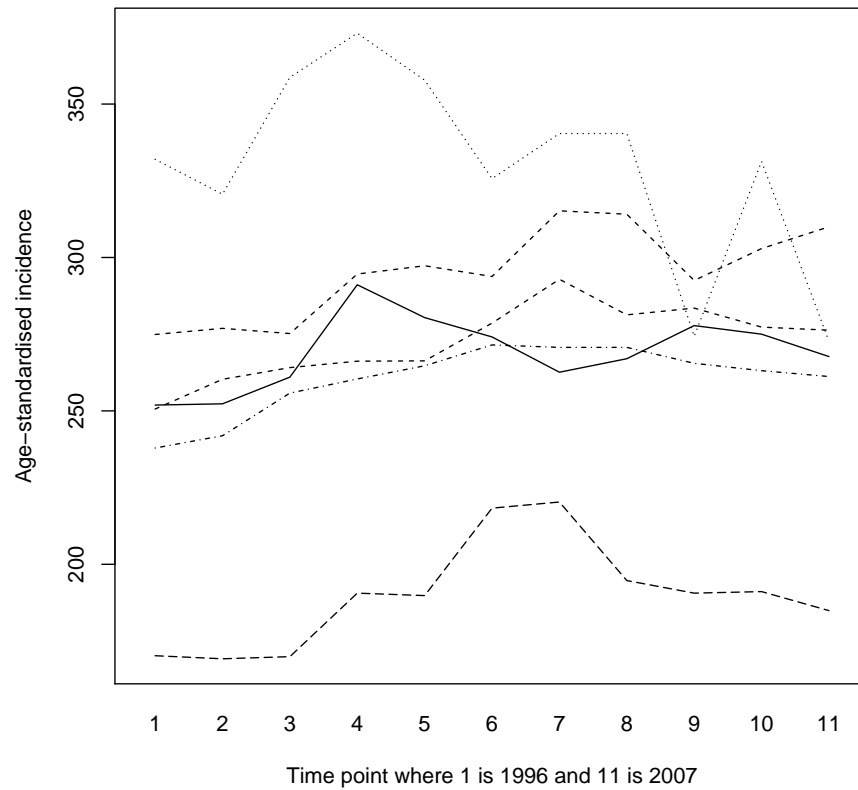


Figure 2. Age-standardised breast cancer incidence rate among women aged 45-85+ years, those countries where use of HRT peaked in 1996-1999, 1996-2007 data

In this graph, we see a reduction in BrCa incidence from 2003 onwards, but a peak in two different time points (??)

Then, we explode another set of graphs where peak HRT use was reached after 2000.

Age-standardised rates of Breast Cancer among women 45–85+, in countries where peak HF

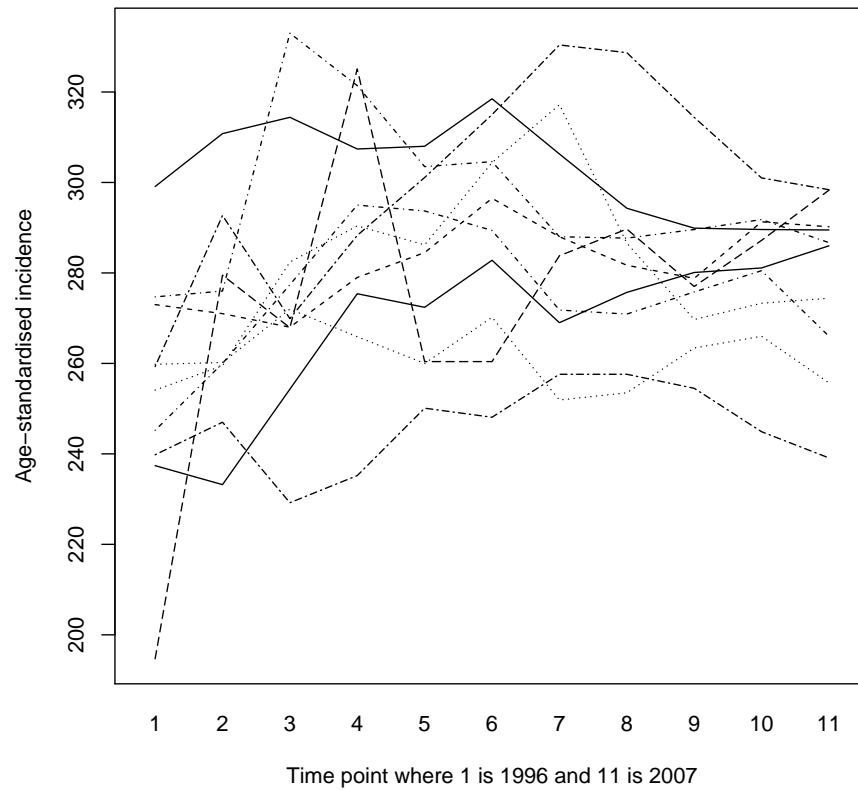


Figure 3. Age-standardised breast cancer incidence rate among women aged 45-85+ years, those countries where use of HRT peaked in 2000 or afterwards, 1996-2007 data

Once again, there is a reduction in the BrCa from 2003 onwards. although the BrCa rates reached a peak in 2002-2003 in most countries almost coeval with the peak in HRT usage.