**Table 1: Study characteristics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Author and publication year** | **Period of first BC [1] dx [2] for cohort/end of follow-up (if different)** | **Study design** | **Country and centre of data derivation** | **Definition of cohort** | **Definition of SPCs [3]** |
| AIRTUM Working Group 20136 | Dx 1976-2010 | Retrospective cohort | Italy (Multiple cancer registries covering up to 48% of population) | All patients dx with a first cancer, although melanoma skin cancer cases, cases based on death certificate only, cases based on autopsy only, and cases with follow-up time equal to zero were excluded. Cohort was stratified by first cancer site, allowing analysis for first BC. | According to IARC/IACR [4] rules |
| Chen 20153 | Dx 1997-2010 | Retrospective cohort | Sweden (FCD [5]) and Germany (12 German cancer registries covering 33% of population) | Patients aged 15y [6] or over at dx of a first primary malignant tumour. Patients with only death certificate/autopsy information were excluded. Cohort was stratified by first cancer site, allowing analysis for first BC. | Germany: According to IARC/IACR rules, not including non-melanoma skin cancer. Sweden: SPC coding rules unstated, but Swedish FCD is linked to the national registry, which uses IARC/IACR rules. Malignancies had to be “clearly separated” to be registered as multiple primaries. |
| Dong 20019 | Dx 1958-1996 | Retrospective cohort | Sweden - FCD | All patients dx with an invasive cancer as a first primary malignancy that was reported to the Swedish FCD. Cohort was stratified by first cancer site, allowing analysis for first BC. | SPC coding rules unstated, but Swedish FCD is linked to Swedish national cancer registry, which uses IARC/AICR rules. |
| Hemminki 20055 | All Dx; Australia, New South Wales: 1972 – 1997, Canada, British Colombia: 1970 – 1998, Canada, Manitoba: 1970 – 1998, Canada, Saskatchewan: 1967 – 1998, Denmark: 1943 – 1997, Finland: 1953 – 1998, Iceland: 1955 – 2000, Norway: 1953 – 1999, Singapore, Chinese: 1968 – 1992, Slovenia: 1961 – 1998, Spain, Zaragoza: 1978 – 1998, Sweden: 1961 – 1998, UK, Scotland: 1975 – 1996 | Retrospective cohort | 13 large cancer registries. Canada (British Columbia, Manitoba and Saskatchewan), Singapore, Slovenia, Norway, Denmark, Scotland, Australia (New South Wales), Sweden, Finland, Iceland, Spain (Zaragoza) | Men dx with a first BC. | According to IARC/IACR rules. Tumours recorded according to the practice of the participating centres. |
| Hung 20167 | Dx 1997-2010, follow-up until 2011 | Retrospective cohort | Taiwan (Registry of Catastrophic Illness) | Patients dx with a first BC. | SPC coding rules unstated, but the registry histologically confirms cancer cases, and oncologists are required to give evidence of the diagnosis for review by commissioned expert panels. This evidence could include cytology reports, pathology reports, laboratory studies, and imaging studies. |
| Jégu 20144 | Dx 1989-2004, follow-up until 2007 | Retrospective cohort | France (10 registries covering the Bas-Rhin, Calvados, Doubs, Hérault, Isère, Manche, Somme and Tarn administrative regions) | Patients dx with a first cancer. Cohort was stratified by first cancer site, allowing analysis for first BC. | According to IARC/IACR rules, with second primary cancers occurring at least 2m [7] (≥61 days) after a first cancer. |
| Satram-Hoang 20078 | Dx 1988-2003 | Retrospective cohort | USA – California Cancer Registry | Men aged under 85 dx with first primary BC, registered at California Cancer Registry. | According to SEER [8] rules. Accepted SPCs had to be malignant, metachronous, and develop at least 2m post-BC dx. Synchronous SPCs developing before this were excluded. |
| Sung 202012 | Dx 1992-2011, follow-up until 2017  | Retrospective cohort | USA – 12 large cancer registries covering 13% of the USA population (Atlanta (Metropolitan), Connecticut, Detroit (Metropolitan), Hawaii, Iowa, Los Angeles, New Mexico, Rural Georgia, San Francisco (Oakland), San Jose (Monterey), Seattle (Puget Sound), Utah) | Patients aged 20-84 dx with a first primary malignant cancer, who had survived at least 5 years since dx. Cohort was stratified by first cancer site, allowing analysis for first BC. | According to SEER rules. |

|  |
| --- |
| 1: Breast Cancer2: Diagnosis/Diagnoses/Diagnosed3: Second Primary Cancer4: International Association of Cancer Registries/International Agency for Research on Cancer 5: Family Cancer Database6: Year/Years7: Month/Months8: Surveillance, Epidemiology, and End Results*Please note that all reference numbers in Table 1 correspond to those in the main body of the article.* |