

Changes relating to the release of 2022 NSW cancer incidence and mortality for Cancer Statistics NSW

Version 1.0, March 2025

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1. Summary

1.1. Date updated

31 March 2025

1.2. Data release

This data release contains 2022 final cancer incidence and mortality data, that incorporates updates to census boundaries and population data, and revisions to cancer type and clinical groups.

1.3. Dashboards impacted

- “Cancer incidence, mortality and relative survival statistics” dashboards:
 - Cancer type summary statistics (excluding “Relative survival”)
 - Cancer incidence and mortality detailed statistics

Caveat:

Note that the “Relative survival” section of the “Cancer type summary” dashboard, along with the “Aboriginal cancer summary” and “Aboriginal cancer incidence and mortality detailed statistics” dashboards, have **not** been updated with new census data or revised cancer types and clinical cancer groups.

1.4. Release summary

In the latest release of Cancer Statistics NSW, the dashboards listed above have been updated or impacted as per below:

- Rare non-melanoma skin cancers have been included.
- Death data from 1982 to 2019 have been updated using a matching process to the National Death Index (NDI).
- Cancer types and clinical cancer groups have been updated from International Classification of Diseases 9th revision (ICD-9) based coding groups to the ICD-10 (version 2019) coding classifications. Descriptions for a few cancer types and clinical groups were also revised.
- NSW and sub-regional population data have been updated from the Australian Statistical Geography Standard (ASGS) 2016 to ASGS Edition 3. Edition 3 was based on the 2021 Australian Bureau of Statistics (ABS) census.
- Geographical boundaries have been updated from ASGS 2016 to ASGS Edition 3.
- Local health district (LHD) version has been updated from 2010 to 2011.
- Region of birth data availability has been extended from 2016 to 2021 in line with available population data.

2. Updates

2.1. Inclusion of rare non-melanoma skin cancer

The cancer incidence and mortality dashboards now include rare non-melanoma skin cancer types such as Merkel cell carcinoma and angiosarcoma. Common non-melanoma skin cancer types basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) are still excluded (ICD-10 code “C44” with 805-811 morphologies). The inclusion of these has changed the overall statistics as outlined below.

In the last five years of available data from 2018-2022, incidence and mortality ‘all cancer’ statistics increased by an average of 1.1% and 0.4% respectively, due to the inclusion of rare non-melanoma skin cancer (Table 1).

Table 1: Non-melanoma skin cancer incidence and mortality, 2018-2022

Incidence/mortality	Number of cases/deaths		
	All cancers (#)	Non-melanoma skin cancer (#)	Non-melanoma skin cancer (%)
Incidence	247,143	2,666	1.1
Mortality	77,632	327	0.4

Skin cancer clinical group case numbers have increased by almost 10%, due to the inclusion of rare non-melanoma skin cancers (Table 2).

Table 2: Impact of inclusion of non-melanoma skin cancer on clinical cancer group, 2018-2022

Clinical cancer group	Number of cases			
	ICD-9	ICD-10 (2019)	Difference (#)	Difference (%)
Skin	27,329	29,991	2,662	9.7

2.2. Death data NDI update

2.2.1. Background

The National Death Index (NDI) is a Commonwealth database developed and maintained by the Australian Institute of Health and Welfare (AIHW). It contains all deaths in Australia since 1980, sourced from the Registrars of Births, Deaths and Marriages in each jurisdiction, the National Coronial Information System and the ABS.

Records for people alive on the Australian Cancer Database (ACD) held by the AIHW who were diagnosed with cancer between 1982 and 2019 have undergone a matching process against the records in the NDI. These data have been used to update the NSW Cancer Registry (NSWCR) death data. This process identifies people who were diagnosed with cancer in NSW but have since moved interstate and died, or people who have died of causes other than cancer.

2.2.2. Use of data for survival reporting

The current release data are complete for reporting survival (of any type) for people who were diagnosed with cancer in NSW between **1982** and **2019** with deaths followed up to **2019**.

2.2.3. Change analysis

The NDI death data update led to an increase in recorded cancer deaths overall of 1.3% between 1982 and 2019 (Table 3). Note: these results exclude rare non-melanoma skin cancer to show the impact of the NDI death update alone.

Table 3: Impact of NDI death data update on the number of cancer deaths, 1982-2019

Cause of death	Total deaths	NDI matched deaths (#)	NDI matched deaths (%)
Cancer death	473,393	6,253	1.3

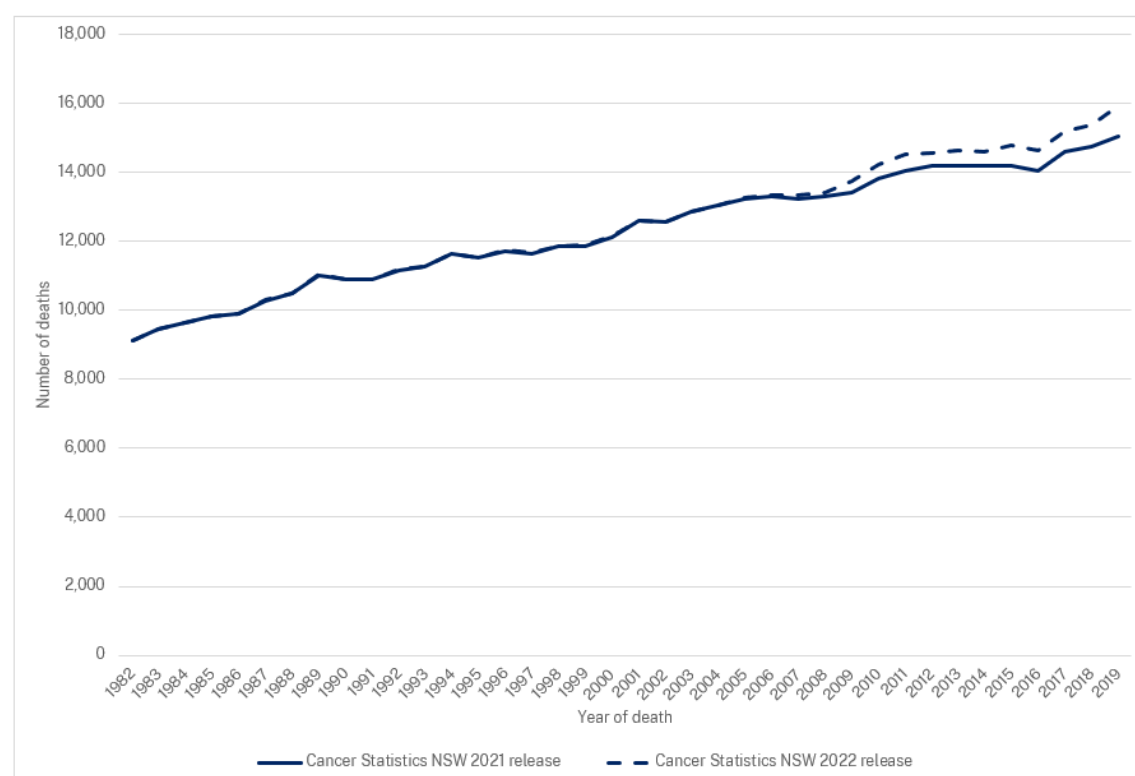
The NDI update primarily impacted deaths from 2009 to 2019, leading to an increase in overall deaths of 13%, of which 3.5% were cancer deaths and 31.1% were non-cancer deaths (Table 4).

Table 4: Impact of NDI death data update on the number of cancer deaths, 2009-2019

Cause of death	Total deaths	NDI matched deaths (#)	NDI matched deaths (%)
Cancer death	162,299	5,726	3.5

The change in number of cancer deaths between the previous and current dashboards is shown in Chart 1.

Chart 1: Impact of NDI death data update on the number of cancer deaths, 1982-2019



2.3. Cancer types and clinical cancer groups updated from ICD-9 to ICD-10

2.3.1. Overview

The previous dashboards contained cancer types and clinical cancer groups based on the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) recoded to follow ICD-9 groupings developed by the Cancer Institute NSW for incidence and mortality reporting. The current dataset release has new cancer types and clinical cancer groups, still based on ICD-O-3 but now recoded to ICD-10 version 2019 codes and regrouped to reflect the most commonly used definitions in Australian incidence and mortality reporting (Table 10). [\[1,2,3\]](#)

For a summary of the coding changes between versions and the full list of the ICD-9 and ICD-10 (2019) cancer types and clinical cancer groups with code groups and definitions, refer to the Appendices (links are below):

- [Table A1: Cancer type coding changes](#)
- [Table A2: Clinical cancer group coding changes](#)
- [Table A3: Cancer type ICD-10 \(2019\)](#)
- [Table A4: Clinical cancer group ICD-10 \(2019\)](#)
- [Table A5: Cancer type ICD-9](#)
- [Table A6: Clinical cancer group ICD-9](#)

2.3.2. Cancer type and clinical group name changes

There have been a few updates to existing cancer type or clinical group names within the dashboards (Table 5).

Table 5: Cancer type and clinical cancer group name changes

Cancer type/clinical cancer group	Previous name	Revised name
Cancer type	Non-Hodgkins lymphoma	Non-Hodgkin lymphoma
Clinical cancer group	Lymphohaematopoietic	Blood cancers
	Cancer unknown primary	Ill-defined sites and unknown primary sites

2.3.3. Cancer type definition changes

The update of ICD-10 (2019) coding and revision of cancer type groupings have changed some existing cancer type definitions. Cancer types impacted by this change are cancer of unknown primary, various blood cancer types, ovarian, rectal and all other. The impact on cancer case numbers for 2018-2022 is shown in Table 6 below.

Cancer of unknown primary has decreased by 22%, due to the removal of “Other and ill-defined sites”, and peritoneal cancers.

Some blood cancer types have changed primarily due to the reclassification of new ICD-O-3.2 codes or the creation of new cancer types:

- Leukaemia has increased by 7.3% due to the movement of new ICD-O-3.2 codes from the now redundant ‘other lymphatic haematopoietic’ cancer to specific leukaemia types:

- ICD-O-3.2 morphology code 981 (B lymphoblastic leukaemia/lymphoma) has been reclassified to acute lymphoblastic leukaemia.
- ICD-O-3.2 morphology codes (9865, 9869, 9877, 9878, 9879, 9898) have been reclassified to acute myeloid leukaemia.
- Multiple myeloma has decreased by 1.0% due to the reclassification of new ICD-O-3.2 morphology codes 9735, 9737 and 9738 to Non-Hodgkin lymphoma.
- Non-Hodgkin lymphoma has decreased by 5.1%, predominantly due to the movement of morphology code 976 (immunoproliferative diseases) to a new immunoproliferative cancer type (C88).

Rectal cancer cases have decreased by 10% due to the removal of anal cancer.

There is a minor decrease in case numbers for ovarian cancer (- 0.4%), due to the reclassification of most fallopian tube cancers to other female genital cancers. Ovarian cancer now consists of cancer of the ovary and high-grade serous carcinomas of the fallopian tube only.

“All other” cancer types have increased by 17.2%, predominantly due to the inclusion of:

- Anal cancer
- Other and ill-defined sites
- Peritoneal cancer

Table 6: Impact of change in cancer type from ICD-9 to ICD-10 on the number of cases, 2018-2022

Cancer type	Number of cases			
	ICD-9	ICD-10 (2019)	Difference (#)	Difference (%)
Cancer unknown primary	5,418	4,222	-1,196	-22.1
Leukaemia	7,349	7,885	536	7.3
Multiple myeloma	3,645	3,609	-36	-1.0
Non-Hodgkin lymphoma	10,348	9,822	-526	-5.1
Ovarian	3,000	2,988	-12	-0.4
Rectal	8,788	7,906	-882	-10.0
All other	12,344	14,470	2,126	17.2

These coding changes are shown in more detail in Appendix [Table A1: Cancer type coding changes](#).

2.3.4. Clinical cancer group definition changes

The update of ICD-10 (2019) coding has meant that some clinical cancer groups have changed definitions, one new grouping has been created, and one has been removed. Existing clinical cancer groups impacted by this change are blood, bowel, and ill-defined and unknown primary sites (previously described as “cancer unknown primary”). The impact on cancer case numbers for 2018-2022 is shown in Table 7 below. Tables 8 and 9 contain the number of cancer cases for new and removed clinical cancer groups, respectively.

There is a negligible change in blood cancer clinical group case numbers, which have slightly increased by 0.1%.

Bowel cancer clinical group case numbers have decreased by 3.4%, due to the removal of anal cancer.

Ill-defined and unknown primary site (formerly “cancer unknown primary”) case numbers have decreased by 6.0% due to the removal of peritoneal cancers.

“All other” is a newly created clinical cancer group, that is made up of anal cancer, eye cancer and peritoneal cancer. The eye cancer clinical group has been removed.

Table 7: Impact of change in clinical cancer group from ICD-9 to ICD-10 on the number of cases, 2018-2022

Clinical cancer group	Number of cases			
	ICD-9	ICD-10 (2019)	Difference (#)	Difference (%)
Blood cancers	27,866	27,888	22	0.1
Bowel	25,621	24,739	-882	-3.4
Ill-defined sites and unknown primary sites	5,418	5,091	-327	-6.0

Table 8: Number of cases for new clinical cancer group (ICD-10), 2018-2022

Clinical cancer group ICD-10	Number of cases (#)	Percentage of cases (%)
All other	1,698	0.7

Table 9: Number of cases for removed clinical cancer group (ICD-9), 2018-2022

Clinical cancer group ICD-9	Number of cases (#)	Percentage of cases (%)
Eye	489	0.2

These coding changes are shown in more detail in Appendix [Table A2: Clinical cancer group coding changes](#).

2.4. NSW and sub-regional population data updated from ASGS 2016 to ASGS Edition 3

The previous dashboards used ASGS 2016 release 2021 of NSW estimated residential populations (ERP) from the Ministry of Health Secure Analytics for Population Health Research and Intelligence (SAPHaRI), based on data from ABS Customised Data Services.

The current dashboards use ASGS Edition 3 release 2022 of NSW ERP from SAPHaRI. Edition 3 was based on the 2021 ABS census. The impact on population data is for 2017 onwards (Table 10).

Table 10: Impact of change in population from ASGS 2016 to ASGS 2021 on the number of people, 1972-2022

Population year	Previous dashboards		Current dashboards			
	ASGS 2016 release 2021		ASGS 2021 release 2022			
	Version	Population	Version	Population	Difference (#)	Difference (%)
30 June 1972 – 30 June 2016	Final	No change	Final	No change	0	0
30 June 2017	Preliminary rebased	7,850,871	Final	7,855,316	-4,445	-0.1
30 June 2018	Preliminary rebased	7,945,580	Final	7,954,476	-8,896	-0.1
30 June 2019	Preliminary rebased	8,034,305	Final	8,046,748	-12,443	-0.2
30 June 2020	Preliminary rebased	8,094,317	Final	8,110,610	-16,293	-0.2
30 June 2021	Preliminary rebased	8,093,815	Final	8,097,062	-3,247	-0.0
30 June 2022	N/A	N/A	Preliminary	8,165,731	N/A	100.0

Further information about the ABS ERP population release 2022 can be found below:

<https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/2022>

The ABS NSW populations above are sourced at ASGS Statistical Area 1 (SA1) level and rolled up using mapping and concordance files to produce the NSW sub-regional populations below:

- Local health district (LHD)
- Local government area (LGA)
- Primary health network (PHN)
- Remoteness
- Socioeconomic position

2.5. Geographical boundaries updated from ASGS 2016 to ASGS Edition 3

The previous dashboards used ASGS 2016 issued by the ABS. The current dashboards have been updated to ASGS Edition 3 (2021).

The following reporting boundaries have been updated:

- Local government area (LGA)
- Remoteness
- Socioeconomic position

Further information about the ASGS Edition 3 (2021) release can be found below:

<https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026>

2.2.1. Local government area

There have been some changes to LGA boundaries, codes and names between ASGS releases as detailed in Table 11 below.

Table 11: Changes to LGA boundaries between ASGS 2016 and ASGS 2021

LGA 2016	LGA 2021	Ratio	Change description
10130 Armidale Regional	10180 Armidale Regional	0.9703365	LGA boundary change & change to code.
	14220 Inverell	0.0296635	
10750 Blacktown	10750 Blacktown	0.999982	LGA boundary change.
	12380 Cumberland	0.000018	
11100 Botany Bay	10500 Bayside	N/A	Merge of Botany Bay and Rockdale LGAs to form Bayside LGA.
11450 Camden	11450 Camden	0.9999408	LGA boundary change.
	11500 Campbelltown	0.0000592	
11500 Campbelltown	11450 Camden	0.0004083	LGA boundary change.
	11500 Campbelltown	0.9995917	
11750 Cobar	11750 Cobar	0.9793109	LGA boundary change.
	14600 Lachlan	0.0206891	
12380 Cumberland	12380 Cumberland	0.9999886	LGA boundary change.
	16260 Parramatta	0.0000114	
13510 Gundagai	12160 Cootamundra-Gundagai Regional	N/A	Changed code and name.
14200 Inverell	14220 Inverell	N/A	LGA boundary change & change to code.
16650 Rockdale	10500 Bayside	N/A	Merge of Botany Bay and Rockdale LGAs to form Bayside LGA.
18230 Western Plains Regional	12390 Dubbo Regional	N/A	Changed code and name.

The impact of the changes to LGA boundaries was minor overall, as shown in Table 12 below. Notable changes occurred in Armidale Regional and Inverell LGAs, where case numbers decreased by 4.3% and increased by 6.4% respectively, due to a boundary realignment between the two LGAs. The other significant change was the merger of Botany Bay and Rockdale LGAs to form Bayside LGA. Note: these results exclude rare non-melanoma skin cancer to show the impact of the boundary change alone.

Table 12: Impact of LGA boundary changes on number of cases, 2018-2022

LGA	Number of cases (2018-2022)			
	ASGS 2016	ASGS 2021	Difference (#)	Difference (%)
10180 Armidale Regional	975	933	-42	-4.3
10750 Blacktown	8,030	8,029	-1	0.0
11100 Botany Bay	1,276	N/A	-1,276	-100.0
10500 Bayside (NSW)	N/A	4,411	4,411	100.0
11450 Camden	2,392	2,397	5	0.2
11500 Campbelltown (NSW)	4,393	4,389	-4	-0.1
11750 Cobar	119	116	-3	-2.5
12380 Cumberland	4,361	4,362	1	0.0
14220 Inverell	656	698	42	6.4
14600 Lachlan	254	254	0	0.0
16260 Parramatta	5,444	5,445	1	0.0
16650 Rockdale	3,135	N/A	-3,135	-100.0

2.2.2. Remoteness

Remoteness for cases diagnosed from 2011 onwards is derived from remoteness classes at Statistical Area 1 (SA1) level, using the logic below:

- Diagnosis year 2011 to 2013 → SA1 2011 remoteness classes
- Diagnosis year 2014 to 2018 → SA1 2016 remoteness classes
- Diagnosis year 2019 onwards → SA1 2021 remoteness classes

In the previous dashboards, SA1 2016 was used for cases diagnosed from 2014 to 2021, however, in the current dashboards, cases from 2019 onwards have been revised using SA1 2021.

The remoteness class assigned historically may have changed, with major cities and inner regional cases increasing by 0.6% and 3.8% respectively, and outer regional cases decreasing by 17.9% between 2019 and 2021 (Table 13). Note: these results exclude rare non-melanoma skin cancer to show the impact of the remoteness change alone.

Table 13: Impact of logic change on the number of cases, by remoteness class, 2019-2021

Remoteness class	ASGS 2016	ASGS 2021	Difference (#)	Difference (%)
Major cities	98,373	98,951	578	0.6
Inner regional	35,500	36,835	1,335	3.8
Outer regional	10,791	8,863	-1,928	-17.9
Remote/very remote	733	733	0	0.0

Remoteness class	ASGS 2016	ASGS 2021	Difference (#)	Difference (%)
Unknown	38	53	15	39.5

For further information about the remoteness classes and structure see the link below:

<https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/remoteness-structure>

2.2.3. Socioeconomic position

Socioeconomic position quintiles for cases diagnosed from 2011 onwards are derived from indices using Statistical Area 1 (SA1) following the logic below. Note: the dashboards use the indices based on the index of relative socioeconomic disadvantage (IRSD).

- Diagnosis year 2011 to 2013 → SA1 2011 quintiles
- Diagnosis year 2014 to 2018 → SA1 2016 quintiles
- Diagnosis year 2019 onwards → SA1 2021 quintiles

In the previous dashboards, SA1 2016 was used for cases diagnosed from 2014 to 2021, however, in the current dashboards, cases from 2019 onwards have been revised using SA1 2021.

The socioeconomic position assigned may have changed historically. For the IRSD, quintile 2 cases increased by 3.4% and quintile 4 cases decreased by 2.2% between 2019 and 2021 (Table 14). Note: these results exclude rare non-melanoma skin cancer to show the impact of the socioeconomic position change alone.

Table 14: Impact of logic change on the number of cases, by socioeconomic position IRSD quintiles, 2019-2021

Socioeconomic position IRSD quintile	ASGS 2016	ASGS 2021	Difference (#)	Difference (%)
Quintile 1 (most disadvantaged)	32,263	31,973	-290	-0.9
Quintile 2	30,400	31,426	1,026	3.4
Quintile 3	28,294	28,389	95	0.3
Quintile 4	27,010	26,428	-582	-2.2
Quintile 5 (least disadvantaged)	26,913	26,747	-166	-0.6
Unknown	555	472	-83	-15.0

For further information about the socioeconomic position indices see the link below:

<https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/2021>

2.6. Local health district (LHD) 2011

The previous dashboards used version 2010 of local health district (LHD) from the Ministry of Health Secure Analytics for Population Health Research and Intelligence (SAPHaRI).

The current dashboards have been updated to version 2011, released in July 2023 by the Centre for Epidemiology and Evidence (CEE) via SAPHaRI.

Changes between the two versions are negligible and due to a minor re-alignment of boundaries (Table 15). Note these results exclude rare non-melanoma skin cancer to show the impact of the boundary change alone.

Table 15: Impact of LHD boundary changes on number of cases, 2018-2022

Local health district	Number of cases (2018-2022)			
	LHD 2010	LHD 2011	Difference (#)	Difference (%)
Sydney LHD	15,765	15,765	0	0.0
South Western Sydney LHD	25,887	25,882	-5	0.0
South Eastern Sydney LHD	25,953	25,947	-6	0.0
Illawarra Shoalhaven LHD	15,101	15,099	-2	0.0
Western Sydney LHD	22,234	22,233	-1	0.0
Nepean Blue Mountains LHD	10,987	10,987	0	0.0
Northern Sydney LHD	27,311	27,313	2	0.0
Central Coast LHD	13,072	13,069	-3	0.0
Hunter New England LHD	34,780	34,789	9	0.0
Northern NSW LHD	12,719	12,718	-1	0.0
Mid North Coast LHD	10,336	10,336	0	0.0
Southern NSW LHD	7,977	7,977	0	0.0
Murrumbidgee LHD	11,216	11,215	-1	0.0
Western NSW LHD	9,993	9,989	-4	0.0
Far West LHD	1,070	1,070	0	0.0
NSW Unknown LHD	76	88	12	15.8%

2.7. Region of birth data updated from 2016 to 2021

The previous dashboards contained region of birth data from 2001 to 2016. The current dashboards have data from 2001 to 2021 as the ABS released updated country of birth population data rebased to the 2021 Census. Note that the country of birth in the latest ABS release is still based on Standard Australian Classification of Countries (SACC) version 2016. The impact on population data is shown in Table 10.

Note that the ABS only release country of birth populations for each Census year alone, so the years in between are created using an interpolation process.

Table 16: Impact of change in country of birth population from ABS Census 2016 to 2021 on the number of people, 2001-2021

Population year	Previous dashboards		Current dashboards			
	ABS Census 2016		ABS Census 2021		Difference (#)	Difference (%)
	Version	Population	Version	Population		
30 June 2001	Final	6,530,830	Final	6,530,830	0	0.00
30 June 2002	Final	6,543,169	Final	6,544,444	1,275	0.02
30 June 2003	Final	6,572,238	Final	6,574,031	1,793	0.03
30 June 2004	Final	6,616,540	Final	6,618,339	1,799	0.03
30 June 2005	Final	6,674,161	Final	6,675,341	1,180	0.02
30 June 2006	Final	6,743,460	Final	6,743,460	0	0.00
30 June 2007	Final	6,825,082	Final	6,825,706	624	0.01
30 June 2008	Final	6,915,420	Final	6,916,271	851	0.01
30 June 2009	Final	7,012,260	Final	7,013,134	874	0.01
30 June 2010	Final	7,114,117	Final	7,114,632	515	0.01
30 June 2011	Final	7,219,280	Final	7,219,280	0	0.00
30 June 2012	Final	7,326,016	Final	7,325,926	-90	0.00
30 June 2013	Final	7,432,298	Final	7,432,188	-110	0.00
30 June 2014	Final	7,536,769	Final	7,536,575	-194	0.00
30 June 2015	Final	7,637,774	Final	7,637,646	-128	0.00
30 June 2016	Final	7,733,810	Final	7,733,810	0	0.00
30 June 2017	Final	N/A	Final	7,827,031	N/A	100.0
30 June 2018	Final	N/A	Final	7,911,660	N/A	100.0
30 June 2019	Final	N/A	Final	7,986,146	N/A	100.0
30 June 2020	Final	N/A	Final	8,049,137	N/A	100.0
30 June 2021	Final	N/A	Final	8,098,280	N/A	100.0

Further information about the ABS country of birth populations can be found below:

<https://www.abs.gov.au/statistics/people/population/australias-population-country-birth/2022>

3. Appendices

3.1. Cancer type and clinical group codes and changes

Table A1: Cancer type group ICD-O-3 coding changes between ICD-9 and ICD-10 (version 2019)

ICD-9 coding		ICD-10 (2019) coding		
Cancer type group	ICD-O-3 topography and/or morphology code	Cancer type group ICD-9	ICD-O-3 topography and/or morphology code	Cancer type group ICD-10
Cancer unknown primary	C26, C39, C48, C76, C80, (C42 and not (M959-M999))	4	C80	4
Leukaemia	Acute lymphoblastic leukaemia (M9835-M9837)	10	Acute lymphoblastic leukaemia (((C420, C421, C424) and (M9728, M9729, M9811, M9836, M9837)), M9812-M9819, M9835)	10
	Acute myeloid leukaemia (M9840, M9861, M9866, M9867, M9870-M9874, M9891, M9895-M9897, M991-M993)	10	Acute myeloid leukaemia (M9840, M9861, M9865-M9867, M9869, M9871-M9874, M9877-M9879, M9891, M9895-M9898, M9910-M9912, M9920, M9930, M9931, M9984)	10
Multiple myeloma	M973	16	M9731-M9734	16
Non-Hodgkin lymphoma	M959, M967-M972, M976	18	M9590, M9591, M9596, M9597, M9671, M9673, M9675, M9678-M9680, M9684, M9688, M9689, M9690, M9691, M9695, M9698, M9700-M9702, M9705, M9708, M9709, M9712, M9714-M9719, M9724, M9726, M9727 and diagnosis year <= 2010, M9735, M9737, M9738, M9766, (not (C420, C421, C424) and (M9670, M9687, M9728, M9729, M9811, M9823, M9826, M9836, M9837)), (C420, C421, C424, C77) and M9699	18
Ovarian	C56, C57.0-C57.7	20	C56, ((C570, C578) and (M8441, M8460, M8461))	20
Rectal	C19-C21	23	C19, C20	23
All other	N/A	N/A	Anal (C21)	28
	N/A	N/A	Other and ill-defined (C26, C39, C76, C422 and (M8890, M9120, M9133))	28
	N/A	N/A	Other skin excl. BCC and SCC (C44 and not (M805-M811, M872-M879))	28

Cancer type group	ICD-9 coding		ICD-10 (2019) coding	
	ICD-O-3 topography and/or morphology code	Cancer type group ICD-9	ICD-O-3 topography and/or morphology code	Cancer type group ICD-10
	N/A	N/A	Retroperitoneum and peritoneum (C48)	28
	Other female genital (C51, C52, C578-C579)	28	Other female genital (C51, C52, C571-C574, C577, C579, ((C570, C578) and not (M8441, M8460, M8461)))	28
	Central nervous system (C70, C72)	28	Other central nervous system (C70, C72, C751-C753)	28
	Other endocrine glands (C74, C75)	28	Other endocrine glands (C74, C750, C754, C755, C758, C759)	28
	Hodgkin lymphoma (M965-M966)	28	Hodgkin lymphoma (M9650-M9655, M9659, M9661-M9665, M9667)	28
	Other lymphatic haematopoietic ((C42, C44, C77) and M959-M997)	28	N/A	N/A
	N/A	N/A	Immunoproliferative ((not (C420, C421, C424, C77) and M9699), M9760-M9762, M9764)	28
	N/A	N/A	Other blood cancers (M9727 and diagnosis year > 2010, M9740-M9742, M9749-M9751, M9755-M9759, M9965-M9968)	28
	N/A	N/A	Myeloproliferative neoplasms (excl. CML) (M9950, M9960-M9964, M9975)	28

Table A2: Clinical cancer group ICD-O-3 coding changes between ICD-9 and ICD-10 (2019)

Clinical cancer group (CCG)	CCG ICD-9	ICD-9 coding	ICD-10 (2019) coding	
		ICD-O-3 topography and/or morphology code	ICD-O-3 topography and/or morphology code	CCG ICD-10
Bowel	4	Colon (C18)	Colon (C18)	4
		Rectal (C19-C20)	Rectal (C19-C20)	4
		Anal (C21)	N/A	N/A
Eye	10	Eye (C69)	N/A	N/A
Ill-defined sites and unknown primary sites	14	Other and ill-defined digestive organs (C26)	Other and ill-defined digestive organs (C26)	14
		Other and ill-defined sites in the respiratory	Other and ill-defined sites in the respiratory	14

Clinical cancer group (CCG)	CCG ICD-9	ICD-9 coding	ICD-10 (2019) coding	
		ICD-O-3 topography and/or morphology code	ICD-O-3 topography and/or morphology code	CCG ICD-10
		system and intrathoracic organs (C39)	system and intrathoracic organs (C39)	
		C422 and (M8890, M9120, M9133)	C422 and (M8890, M9120, M9133)	14
		Retroperitoneum and peritoneum (C48)	N/A	N/A
		Other and ill-defined sites (C76)	Other and ill-defined sites (C76)	14
		Cancer unknown primary (C80)	Cancer unknown primary (C80)	14
All other	N/A	N/A	Anal (C21)	15
		N/A	Retroperitoneum and peritoneum (C48)	15
		N/A	Eye (C69)	15

Table A3: Cancer type group ICD-10 (2019) with ICD-O-3 and ICD-10 code mapping

Cancer type group ICD-10	Name	ICD-O-3 topography and/or morphology code	ICD-10 (2019) code
1	Bladder	C67	C67
2	Brain	C71	C71
3	Breast	C50	C50
4	Cancer unknown primary	C80	C80
5	Cervical	C53	C53
6	Colon	C18	C18
7	Gallbladder	C23, C24	C23, C24
8	Head and neck	Tongue (C01, C02)	C01, C02
		Mouth (C03-C06)	C03-C06
		Salivary gland (C07, C08)	C07, C08
		Oropharyngeal (C09, C10)	C09, C10
		Nasopharyngeal (C11)	C11
		Hypopharyngeal (C12, C13)	C12, C13
		Other oral cavity and pharyngeal (C14)	C14

Cancer type group ICD-10	Name	ICD-O-3 topography and/or morphology code	ICD-10 (2019) code
		Nasal cavity and sinus (C30, C31)	C30, C31
		Laryngeal (C32)	C32
9	Kidney	C64-C66, C68	C64-C66, C68
10	Leukaemia	Acute lymphoblastic leukaemia ((C420, C421, C424) and (M9728, M9729, M9811, M9836, M9837)), M9812-M9819, M9835)	C910
		Chronic lymphocytic leukaemia (C420, C421, C424) and (M9670, M9823)	C911
		Other and unspecified lymphoid leukaemias (M9820, M9827, M9831-M9834, M9870, M9940, M9948, ((C420, C421, C424) and (M9687, M9826))	C913-C919, C947
		Acute myeloid leukaemia (M9840, M9861, M9865-M9867, M9869, M9871-M9874, M9877-M9879, M9891, M9895-M9898, M9910-M9912, M9920, M9930, M9931, M9984)	C920, C923-C928, C930, C940, C942, C944
		Chronic myeloid leukaemia (M9863, M9875)	C921
		Other and unspecified myeloid leukaemias (M9876, M9860)	C922, C929
		Chronic myelomonocytic leukaemia (M9945, M9946)	C931, C933
		Other and unspecified leukaemias (M9800, M9801, M9805-M9809)	C950, C959
11	Lip	C00	C00
12	Liver	C22	C22
13	Lung	C33, C34	C33, C34
14	Melanoma of skin	C44 and M872-M879	C43
15	Mesothelioma	M905	C45
16	Multiple myeloma	M9731-M9734	C90
17	Myelodysplasia	M9980, M9982, M9983, M9985- M9987, M9989, M9991-M9993	D46
18	Non-Hodgkin lymphoma	M9590, M9591, M9596, M9597, M9671, M9673, M9675, M9678-	C82-C86

Cancer type group ICD-10	Name	ICD-O-3 topography and/or morphology code	ICD-10 (2019) code
		M9680, M9684, M9688, M9689, M9690, M9691, M9695, M9698, M9700-M9702, M9705, M9708, M9709, M9712, M9714-M9719, M9724, M9726, M9727 and diagnosis year <= 2010, M9735, M9737, M9738, M9766, (not (C420, C421, C424) and (M9670, M9687, M9728, M9729, M9811, M9823, M9826, M9836, M9837)), (C420, C421, C424, C77) and M9699	
19	Oesophageal	C15	C15
20	Ovarian	C56, ((C570, C578) and (M8441, M8460, M8461))	C56, (C570, C578 (with morphologies 8441, 8460, 8461))
21	Pancreatic	C25	C25
22	Prostate	C61	C61
23	Rectal	C19, C20	C19, C20
24	Stomach	C16	C16
25	Testicular	C62	C62
26	Thyroid	C73	C73
27	Uterine	C54, C55	C54, C55
28	All other	Small intestine (C17)	C17
		Anal (C21)	C21
		Other and ill-defined (C26, C39, C76, C422 and (M8890, M9120, M9133))	C26, C39, C76
		Other thoracic (C37, C38)	C37, C38
		Bone (C40, C41)	C40, C41
		Other skin excl. BCC and SCC (C44 and not (M805-M811, M872-M879))	C44
		Kaposi's sarcoma (M9140)	C46
		Connective tissue, peripheral nerves (C47, C49)	C47, C49
		Retroperitoneum and peritoneum (C48)	C48
		Placental (C58)	C58
		Other female genital (C51, C52, C571-C574, C577, C579, ((C570, C578 (with	C51, C52, C57 (excluding C570, C578 (with

Cancer type group ICD-10	Name	ICD-O-3 topography and/or morphology code	ICD-10 (2019) code
		C578) and not (M8441, M8460, M8461)))	morphologies 8441, 8460, 8461))
		Other male genital (C63, C60)	C63, C60
		Eye (C69)	C69
		Other central nervous system (C70, C72, C751-C753)	C70, C72, C751-C753
		Other endocrine glands (C74, C750, C754, C755, C758, C759)	C74, C750, C754, C755, C758, C759
		Hodgkin lymphoma (M9650-M9655, M9659, M9661-M9665, M9667)	C81
		Immunoproliferative ((not (C420, C421, C424, C77) and M9699), M9760-M9762, M9764)	C88
		Other blood cancers (M9727 and diagnosis year > 2010, M9740-M9742, M9749-M9751, M9755-M9759, M9965-M9968)	C943, C962, C964, C966-C968
		Myeloproliferative neoplasms (excl. CML) (M9950, M9960-M9964, M9975)	D45, D471, D473-D475

Table A4: Clinical cancer group ICD-10 with ICD-10 (2019) code mapping

Please see Appendix “[Table A3: Cancer type ICD-10](#)” for ICD-O-3 code mapping.

Clinical cancer group ICD-10	Name	ICD-10 (2019) code
1	Skin	Lip (C00)
		Melanoma of skin (C43)
		Other skin excl. BCC and SCC (C44)
		Kaposi's sarcoma (C46)
2	Head and neck	Tongue (C01, C02)
		Mouth (C03-C06)
		Salivary gland (C07, C08)
		Oropharyngeal (C09, C10)
		Nasopharyngeal (C11)
		Hypopharyngeal (C12, C13)
		Other oral cavity and pharyngeal (C14)

Clinical cancer group ICD-10	Name	ICD-10 (2019) code
		Nasal cavity and sinus (C30, C31)
		Laryngeal (C32)
3	Upper gastrointestinal	Oesophageal (C15)
		Stomach (C16)
		Small intestinal (C17)
		Liver (C22)
		Gallbladder (C23, C24)
		Pancreatic (C25)
4	Bowel	Colon (C18)
		Rectal (C19, C20)
5	Respiratory	Lung (C33, C34)
		Other thoracic (C37, C38)
		Mesothelioma (C45)
6	Bone and connective tissue	Bone (C40, C41)
		Connective tissue, peripheral nerves (C47, C49)
7	Breast	Breast (C50)
8	Urogenital	Prostate (C61)
		Testicular (C62)
		Other male genital (C63, C60)
		Kidney (C64-C66, C68)
		Bladder (C67)
9	Gynaecological	Cervical (C53)
		Uterine (C54, C55)
		Ovarian (C56, (C570, C578 (with morphologies 8441, 8460, 8461)))
		Placental (C58)
		Other female genital (C51, C52, C57 (excluding C570, C578 (with morphologies 8441, 8460, 8461)))
10	N/A	N/A
11	Neurological	Brain (C71)

Clinical cancer group ICD-10	Name	ICD-10 (2019) code
		Other central nervous system (C70, C72, C751-C753)
12	Thyroid and other endocrine	Thyroid (C73)
		Other endocrine glands (C74, C750, C754, C755, C758, C759)
13	Blood cancers	Hodgkin lymphoma (C81)
		Non-Hodgkin lymphoma (C82-C86)
		Immunoproliferative (C88)
		Multiple myeloma (C90)
		Acute lymphoblastic leukaemia (C910)
		Chronic lymphocytic leukaemia (C911)
		Other and unspecified lymphoid leukaemias (C913-C919, C947)
		Acute myeloid leukaemia (C920, C923-C928, C930, C940, C942, C944)
		Chronic myeloid leukaemia (C921)
		Other and unspecified myeloid leukaemias (C922, C929)
		Chronic myelomonocytic leukaemia (C931, C933)
		Other and unspecified leukaemias (C950, C959)
		Other blood cancers (C943, C962, C964, C966-C968)
		Myeloproliferative neoplasms (excl. CML) (D45, D471, D473-D475)
		Myelodysplasia (D46)
14	Ill-defined sites and unknown primary sites	Other and ill-defined digestive organs (C26)
		Other and ill-defined sites in the respiratory system and intrathoracic organs (C39)
		Other and ill-defined sites (C76)
		Cancer of unknown primary (C80)
15	All other	Anal (C21)
		Retroperitoneum and peritoneum (C48)
		Eye (C69)

Table A5: Cancer type group ICD-9 with ICD-O-3 code mapping

Cancer type group ICD-9	Name	ICD-O-3 topography and/or morphology code
1	Bladder	C67
2	Brain	C71
3	Breast	C50
4	Cancer unknown primary	Other and ill-defined digestive organs (C26)
		Other and ill-defined sites in the respiratory system and intrathoracic organs (C39)
		Hematopoietic and reticuloendothelial systems (C42 and not M959-M999)
		Retroperitoneum and peritoneum (C48)
		Other and ill-defined sites (C76)
		Unknown primary site (C80)
5	Cervical	C53
6	Colon	C18
7	Gallbladder	C23, C24
8	Head and neck	Tongue (C01, C02)
		Mouth (C03-C06)
		Salivary gland (C07, C08)
		Oropharyngeal (C09, C10)
		Nasopharyngeal (C11)
		Hypopharyngeal (C12, C13)
		Other oral cavity and pharyngeal (C14)
		Nasal, sinus (C30, C31)
		Laryngeal (C32)
9	Kidney	C64-C66, C68
10	Leukaemia	Acute lymphoblastic leukaemia (M9835-M9837)
		Other lymphoid leukaemia (M982-M983)
		Acute myeloid leukaemia (M9840, M9861, M9866, M9867, M9870-M9874, M9891, M9895-M9897, M991-M993)
		Other myeloid leukaemia (M9860, M9863, M9875, M9876, M9945, M9946, M9963)
		Other specified leukaemia (M9940, M9948)

Cancer type group ICD-9	Name	ICD-O-3 topography and/or morphology code
		Unspecified leukaemia (M980)
11	Lip	C00
12	Liver	C22
13	Lung	C33, C34
14	Melanoma of the skin	C44 and M872-M879
15	Mesothelioma	M905
16	Multiple myeloma	M973
17	Myelodysplasia	(C42, C77) and M998-M999
18	Non-Hodgkins lymphoma	M959, M967-M972, M976
19	Oesophageal	C15
20	Ovarian	C56, C57.0-C57.7
21	Pancreatic	C25
22	Prostate	C61
23	Rectal	C19-C21
24	Stomach	C16
25	Testicular	C62
26	Thyroid	C73
27	Uterine	C54, C55
28	All other	Small intestinal (C17)
		Other thoracic (C37, C38)
		Bone (C40, C41)
		Kaposi's sarcoma (M914)
		Connective tissue, peripheral nerves (C47, C49)
		Placental (C58)
		Other female genital (C51, C52, C578-C579)
		Other male genital (C63, C60)
		Eye (C69)
		Central nervous system (C70, C72)
		Other endocrine glands (C74, C75)

Cancer type group ICD-9	Name	ICD-O-3 topography and/or morphology code
		Hodgkin lymphoma (M965-M966)
		Other lymphatic haematopoietic ((C42, C44, C77) and M959-M997)

Table A6: Clinical cancer group ICD-9 with ICD-O-3 code mapping

Clinical cancer group ICD-9	Name	ICD-O-3 topography and/or morphology code
1	Skin	Lip (C00) Melanoma of the skin (C44 and M872-M879) Kaposi's sarcoma (M914)
2	Head and neck	Tongue (C01, C02) Mouth (C03-C06) Salivary gland (C07, C08) Oropharyngeal (C09, C10) Nasopharyngeal (C11) Hypopharyngeal (C12, C13) Other oral cavity and pharyngeal (C14) Nasal, sinus (C30, C31) Laryngeal (C32)
3	Upper gastrointestinal	Oesophageal (C15) Stomach (C16) Small intestinal (C17) Liver (C22) Gallbladder (C23, C24) Pancreatic (C25)
4	Bowel	Colon (C18) Rectal (C19-C21)
5	Respiratory	Lung (C33, C34) Other thoracic (C37, C38) Mesothelioma (M905)
6	Bone and connective tissue	Bone (C40, C41) Connective tissue, peripheral nerves (C47, C49)
7	Breast	Breast (C50)
8	Urogenital	Prostate (C61) Testicular (C62) Kidney (C64-C66, C68) Bladder (C67) Other male genital (C60, C63)

Clinical cancer group ICD-9	Name	ICD-O-3 topography and/or morphology code
9	Gynaecological	Cervical (C53) Uterine (C54, C55) Ovarian (C56, C57.0-C57.7) Placental (C58) Other female genital (C51, C52, C57.8-C57.9)
10	Eye	Eye (C69)
11	Neurological	Brain (C71) Central nervous system (C70, C72)
12	Thyroid and other endocrine	Thyroid (C73) Other endocrine glands (C74, C75)
13	Blood cancers	Note: Logic is applied in order shown Hodgkin lymphoma (M965-M966) Non-Hodgkin lymphoma (M959, M967-M972, M976) Acute lymphoblastic leukaemia (M9835-M9837) Other lymphoid leukaemia (M982-M983) Acute myeloid leukaemia (M9840, M9861, M9866, M9867, M9870-M9874, M9891, M9895-M9897, M991-M993) Other myeloid leukaemia (M9860, M9863, M9875, M9876, M9945, M9946, M9963) Other specified leukaemia (M9940, M9948) Unspecified leukaemia (M980) Multiple myeloma (M973) Other lymphoid haematopoietic ((C42, C44, C77) and M959-M997) Myelodysplasia ((C42, C77) and M998-M999)
14	Cancer of unknown primary	Other and ill-defined digestive organs (C26) Other and ill-defined sites in the respiratory system and intrathoracic organs (C39) Hematopoietic and reticuloendothelial systems (C42 and not M959-M999) Retroperitoneum and peritoneum (C48) Other and ill-defined sites (C76) Unknown primary site (C80)
15	Other skin	Non melanoma skin cancer (C44 and not (M805-M811))

4. Glossary

Abbreviation	Explanation
ABS	Australian Bureau of Statistics
ACD	Australian Cancer Database
AIHW	Australian Institute of Health and Welfare
ASGS	Australian Statistical Geography Standard
BCC	Basal cell carcinoma
CINSW	Cancer Institute NSW
CEE	Centre for Epidemiology and Evidence
ERP	Estimated residential populations
LHD	Local health district
LGA	Local government area
MoH	Ministry of Health
NDI	National Death Index
PHN	Primary health network
SA1	Statistical Area 1
SACC	Standard Australian Classification of Countries
SAPHaRI	Secure Analytics for Population Health Research and Intelligence
SCC	Squamous cell carcinoma

5. References

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