**Appendix 1 Data sources**

1) <u>Description of administrative databases used in the analysis</u>

| Database | Description |
|---|---|
| **Ontario Cancer Registry (OCR)** | The OCR is the provincial registry of all incident cancer diagnoses in Ontario with a capture rate of 96%. Information included in the registry: cancer topography and morphology/histology, and details on diagnosis (e.g., types of contributing information to the diagnosis, dates), and patients who have died of cancer. |
| **Ontario Health Insurance Plan (OHIP) Claims Database** | The OHIP claims database contains all physician billing records including information on diagnoses and services provided, such as receipt of chemotherapy and radiotherapy.<br>Chemotherapy: G339, G345, G359, G381, G281, G382, G388<br>Radiotherapy: X310, X311, X312, X313, X302, X304, X305, X306, X322, X323, X334, X324, X325, X326, X327, X335, X328, X329, X332, X336, X330 |
| **Discharge Abstract Database (DAD) and Same Day Surgery (SDS)** | The DAD and SDS are both data holdings of the Canadian Institute for Health Information (CIHI) that capture administrative, clinical, and demographic information on hospital discharges (including deaths, sign-outs, and transfers) and day surgery. |
| **Registered Persons Database (RPDB)** | The RPDB is an ICES database derived from all administrative data sources and provides demographic data including age, patient residence, vital status, date of last contact with the healthcare system, and OHIP eligibility. |
| **Immigration, Refugees and Citizenship Canada (IRCC) Permanent Residents database** | The IRCC Permanent Resident Database (with data from January 1985 to May 2017) includes records of individuals who immigrated to Ontario during this period. |
| **Ontario Marginalization Index (ON-MARG)** | The ON-MARG is a specialized database using census data to profile relative area-level marginalization dependency, deprivation, ethnic concentration, and instability at various geographic levels in Ontario. The material deprivation dimension captures the proportion of population that is without a high school degree, unemployed, low-income, single-parent families, receiving government transfer payments, and living in dwelling in need of a major repair. |
| **Ontario Registrar General (ORG)** | The ORG contains gold standard vital status data for all Ontarians. According to the Vital Statistics Act, it is mandatory to register all deaths occurring in the province. |

2) <u>Identifying cancer types from the Ontario Cancer Registry (OCR)</u>

| Cancer site | ICD-O-3 code |
|---|---|
| Breast | C50 |
| Central nervous system | C70.0, C70.1, C70.9, C71, C72 |
| Colorectal | C17, C18, C19.9, C20.9, C21.0, C21.1, C21.2, C21.8 |
| Cervical | C53.0, C53.1, C53.8, C53.9 |

| Cancer site | ICD-O-3 code |
|---|---|
| Endocrine | C73.9, C74.0, C74.1, C74.9, C75 |
| Esophagus | C15 |
| Genitourinary | C60, C62, C64, C65, C66, C67, C68 |
| Gynecological exclude cervical | C51, C52, C54, C55, C56, C57 |
| Head and neck | C10.0, C10.1, C10.2, C10.3, C10.4, C10.8, C10.9, C01.9, C02.0, C02.1, C02.2, C02.3, C02.4, C02.8, C02.9, C03.0, C03.1, C03.9, C04.0, C04.1, C04.8, C04.9, C05.0, C05.1, C05.2, C05.8, C05.9, C06.0, C06.1, C06.2, C06.8, C06.9, C07.9, C08.0, C08.1, C08.8, C08.9, C09.0, C09.1, C09.8, C09.9, C11.0, C11.1, C11.2, C11.3, C11.8, C11.9, C12.9 , C14.0, C14.2, C14.8, C76.0, C06.9, C14.8, C32.0, C32.1, C32.3, C32.8, C32.9, C13.0, C13.1, C13.2, C13.8, C13.9, C00.0, C00.1, C00.2, C00.3, C00.4, C00.5, C00.6, C00.8, C00.9, C14.8, C44.0 |
| Hepatic, pancreatic or biliary | C22.0, C22.1, C23, C24, C25 |
| Lung | C34 |
| Lymphoma | C77 |
| Prostate | C61.9 |
| Sarcoma | C00.0, C00.1, C00.3, C00.5, C00.9, C01.9 to C02.3, C02.8 to C03.1, C03.9, C04.0, C04.9, C.05.0, C05.1, C05.9, C06.0, C06.2, C06.9, C07.9, C08.0, C08.9, C09.0, C09.9, C10.3, C10.9, C11.0 to C11.3, C11.8, C11.9, C13.0, C13.1, C13.8, C13.9, C14.0, C14.8, C15.0, C15.3, C15.4, C15.5, C15.9, C16.0 to C16.6, C16.8 to C17.3, C17.8 to C18.9, C19.9, C20.9, C22.0, C22.1, C23.9 to C24.1, C24.9 to C25.2, C25.9, C30.0, C30.1, C31.1 to C31.3, C31.8 to C32.3, C32.9, C33.9 to C34.3, C34.8, C34.9, C37.9 to C38.3, C40.1 to C40.3, C40.8 to C41.4, C41.9, C42.1 to C42.4, C44.0 to C44.9, C47.0 to C47.9, C49.0 to C49.9, C50.0 to C512, C51.8, C51.9, C52.9 to C53.1, C53.8 to C54.3, C54.8, C54.9, C56.9 to C57.4, C57.7 to C57.9, C60.0 to C60.2, C60.9, C61.9 to C62.1, C62.9 to C63.2, C63.7 to C63.9, C649., C65.9, C66.9 to C68.0, C68.8, C69.0, C69.3, C69.6, C69.8, C70.0, C70.1, C70.9 to C72.0, C72.5, C72.9, C73.9 to C74.1, C74.9, C75.5, C77.0 to C77.9 with morphology code 803*, 831*, 871*, 880*-885*, 890*-900*, 912*, 914*, 917*-919*, 922*-924*, 926*, 933*, 944*, 948*, 953*, 958*, 974*-975*, 993* |
| Stomach | C16 |
| Other | C26.0, C26.8, C26.9, C30, C31, C32.2, C33.9, C37.9, C38, C39, C40, C41, C42.0-C42.4, C44.1, C48, C49, C58.9, C63, C76, C80.9 |