Cancer incidence and mortality in New York and Brooklyn. Brooklyn Demographics

According to the definition provided by the National Cancer Institute "cancer is the name given to a collection of related diseases. In all types of cancer, some of the body's cells begin to divide without stopping and spread into surrounding tissues." A staggering 40% of Americans will be diagnosed with cancer during their lifetimes. In 2017 it was anticipated that cancer would take the lives of 600,000 adults and about 2,000 children in the US.[1] New York State cancer incidence is the fifth highest among 50 states and the District of Columbia. Cancer is the second leading cause of death in NY State (after heart disease) among adults and the second cause of death among children after injuries. New York State cancer incidence in 2014 (last year of reported statistic data)[2] was 476.5 cases per 100,000 persons. The number of people who are diagnosed with cancer every year in NY State has been increasing. In New York State, about 1,000 children under the age of 20 are diagnosed with cancer each year (although childhood cancers only represent 1% of the total).[2] Cancer does not affect everyone in the state equally. Many factors influence cancer incidence and mortality: number of inhabitants per sq./ft., access to health insurance and medical care, income, education level, race and ethnicity and cultural factors associated with race, ethnicity, and national origin).

In New York City the average rate per 100,000 persons diagnosed with cancer (2010-2014) was 513.0 (males) and 415.7 (females) with average annual death rates of 174.1 (males) ad 125.7 (females).[3] Rates are higher for males than the average for the state.
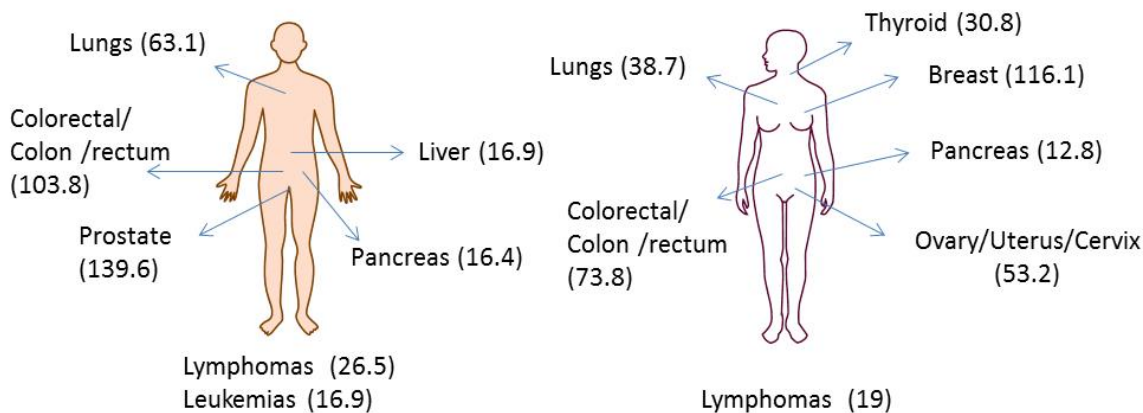
Table 1. Demographics in Brooklyn (2016). Total population 2,629,150.[4]

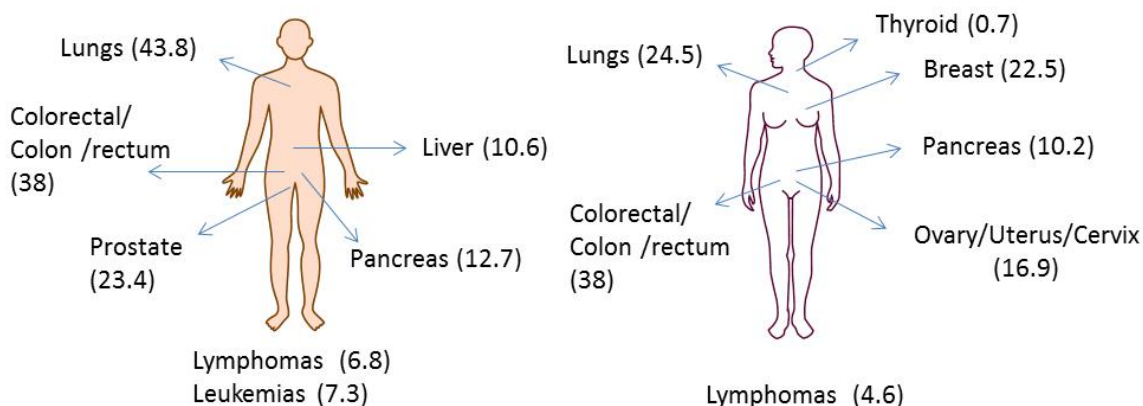| Age (years)	Gender	Ethnicity	Education
Under 18 23.2%	Females 52.8%	White alone 49.6%	High School graduate or higher 80%
Between 18-65 64.1 %		Black or African American alone 34.6%	Bachelor's degree or higher 34.1%
Over 65 12.7 %		Hispanic or Latino 19.2%	**Income**
Health	**In civilian labor force**	White alone not Hispanic or Latino 36%	Median household income (2016 $) 2012-2016 $50640
With a disability under age 65 years 6.0%	Total, % age 16 years or older 63.5%	American Indian and Alaska Native alone 1%	Per capita income in the past 12 months ($2016) 2012-2016 $28134
Persons without health insurance under age 65 years 10.2%	Female, % age 16 years or older 59.1%	Two or more races 2.5%	Persons in poverty (%) 20.6%

For the borough of Brooklyn the rates are similar with 511.3 (males) and 414.2 (females) people diagnosed with cancer per 100,000 persons and mortality rates of 179.4 (males) and 131.3 (females).[5]

Brooklyn is a diverse urban nucleus with a total population of 2,629,150 and a high population density.[4] The borough is also ethnically, economically, and educationally diverse (Table 1). Foreign-born inhabitants in Brooklyn represent 37.5% of the population and a variety of languages besides English are spoken in Brooklyn households. All these factors must be considered when comparing cancer incidence and mortality and cancer prevention with other boroughs in NYC, New York State, and other states in the US. On many occasions people from low socio-economic backgrounds, different ethnicities, or country of origin are less likely to have information/access regarding prevention, diagnosis, and potential free treatments for cancer (e.g. clinical trials).

Cancer Incidence Brooklyn Borough, Rate Per 100, 000 males or females (2010-2014 Data)

Lungs (63.1)
Colorectal/ Colon /rectum (103.8)
Prostate (139.6)
Liver (16.9)
Pancreas (16.4)
Lymphomas (26.5)
Leukemias (16.9)

Thyroid (30.8)
Lungs (38.7)
Breast (116.1)
Pancreas (12.8)
Colorectal/ Colon /rectum (73.8)
Ovary/Uterus/Cervix (53.2)
Lymphomas (19)

Cancer Mortality Brooklyn Borough, Rate Per 100, 000 males or females (2010-2014 Data)

Lungs (43.8)
Colorectal/ Colon /rectum (38)
Prostate (23.4)
Liver (10.6)
Pancreas (12.7)
Lymphomas (6.8)
Leukemias (7.3)

Thyroid (0.7)
Lungs (24.5)
Breast (22.5)
Pancreas (10.2)
Colorectal/ Colon /rectum (38)
Ovary/Uterus/Cervix (16.9)
Lymphomas (4.6)

Figure 1. Cancer incidence and mortality per type of cancer (Brooklyn 2010-2014).[5] The figure depicts solely cancers with an incidence higher than 10 per 100,000 people (divided by gender).

In terms of types of cancer found in Brooklyn, prostate cancer is still the cancer with higher incidence and mortality rate for males followed by lung and colon and colorectal cancers. For females, breast cancer has higher incidence and mortality rates followed by lung, colorectal and colon, uterus and thyroid cancer*. Some cancers (like pancreas or liver) do not have a very high incidence but they have a high mortality rate*. For children and teenagers, like in the rest of the US, the most common cancers are leukemias, *tumors of the brain, spinal cord and other parts of the nervous system, and lymphomas*.

Cancer is thus a real burden in our borough and one of the main health issues in the population. Cancer's challenges are far reaching: affecting not only the people diagnosed but also their families and caregivers. Cancer ultimately impacts the physical and emotional health of patients and their families, their work and everyday life, and finances*. It deeply affects the borough of Brooklyn.*

References

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   https://www.cancer.gov/about-nci/budget/plan/

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