



POWER Study Women's Health Equity Report

# Cancer

Chapter 4

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Project for an Ontario Women's Health Evidence-Based Report

# A Tool for Monitoring and Improvement

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The **P**roject for an **O**ntario **W**omen's Health **E**vidence-Based **R**eport (**POWER**) will serve as a tool to help policymakers and providers to improve the health of and reduce inequities among the women of Ontario.

# Uses for POWER Study

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- Priority Setting
- Building the Evidence Base
- Informing Practice and Policy
- Tool for Improvement
- Integrating Equity into Planning and Quality Improvement

# Stakeholder Consultations

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- Power Study Roundtables
- Consumers: representatives of community based groups and associations
- Providers: clinicians, government, health data agencies, LHINs, CHCs, CCACs
- Range of areas and interests
  - Especially cancer, cardiovascular, and depression
  - Some representation from outside GTA

# Ontario Women's Health Equity Report

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## Volume 1

- Burden of Illness
- Cancer
- Depression
- Cardiovascular disease
- Access to Health Care
- Conclusions and Policy Implications

## Volume 2

- Diabetes
- HIV Infection
- Musculoskeletal Disorders (arthritis, osteoporosis)
- Reproductive and Gynecological Health
- Special Populations (low income, immigrant and older women)
- Social Determinants of Health

## Interactive data cube

# Measuring and Monitoring Gender Differences in Cancer Indicators

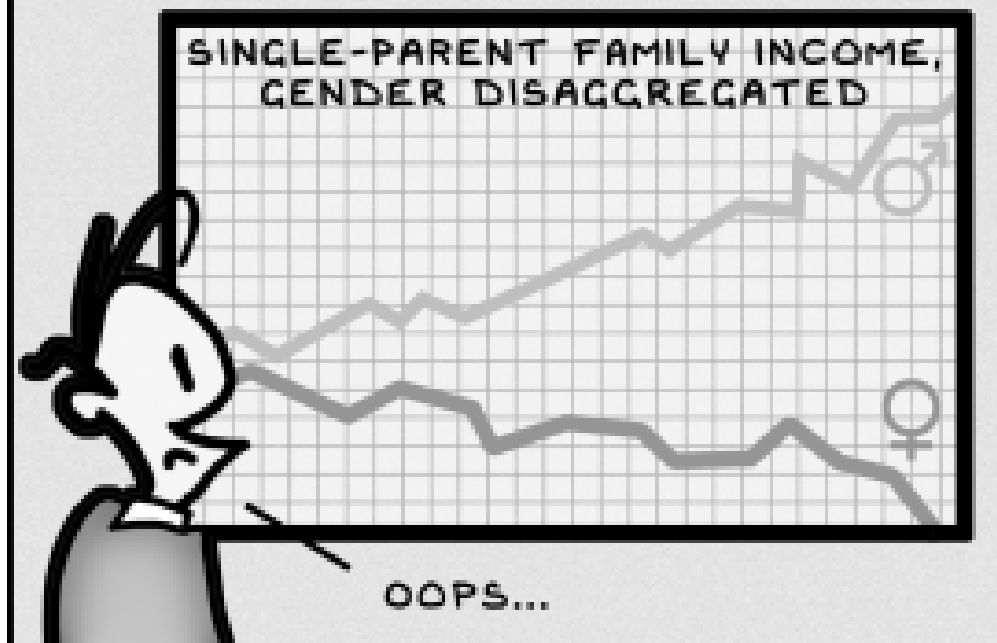
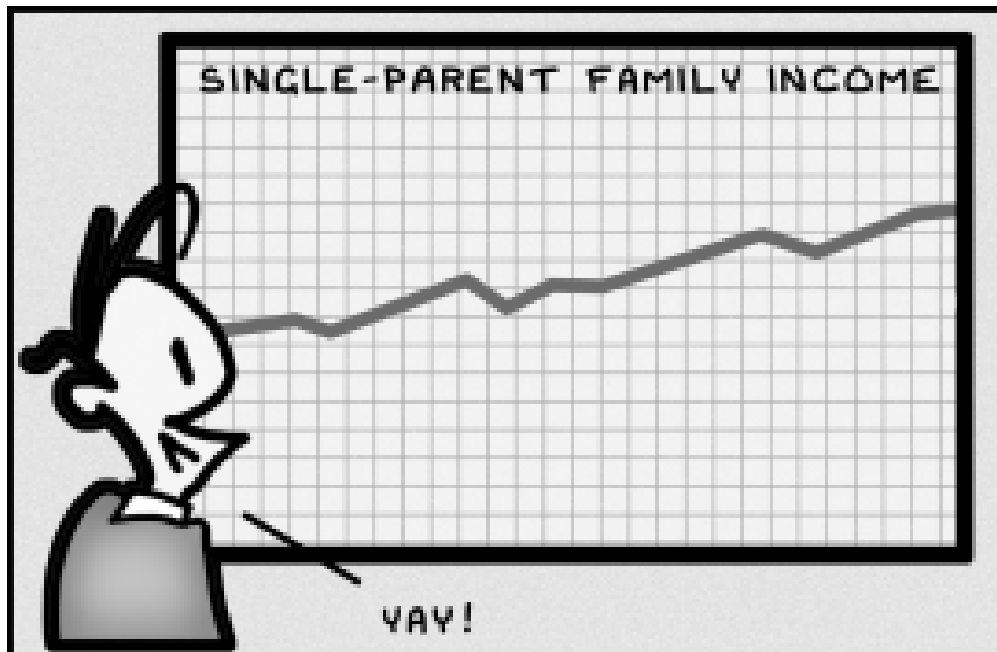
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## **Women and men have very different:**

- Patterns of illness, morbidity, and mortality
- Social contexts
- Experiences with health care

## **Health inequities among women associated with:**

- Socioeconomic position
- Age
- Geography



# Women's Health Reporting: Developing a New Model

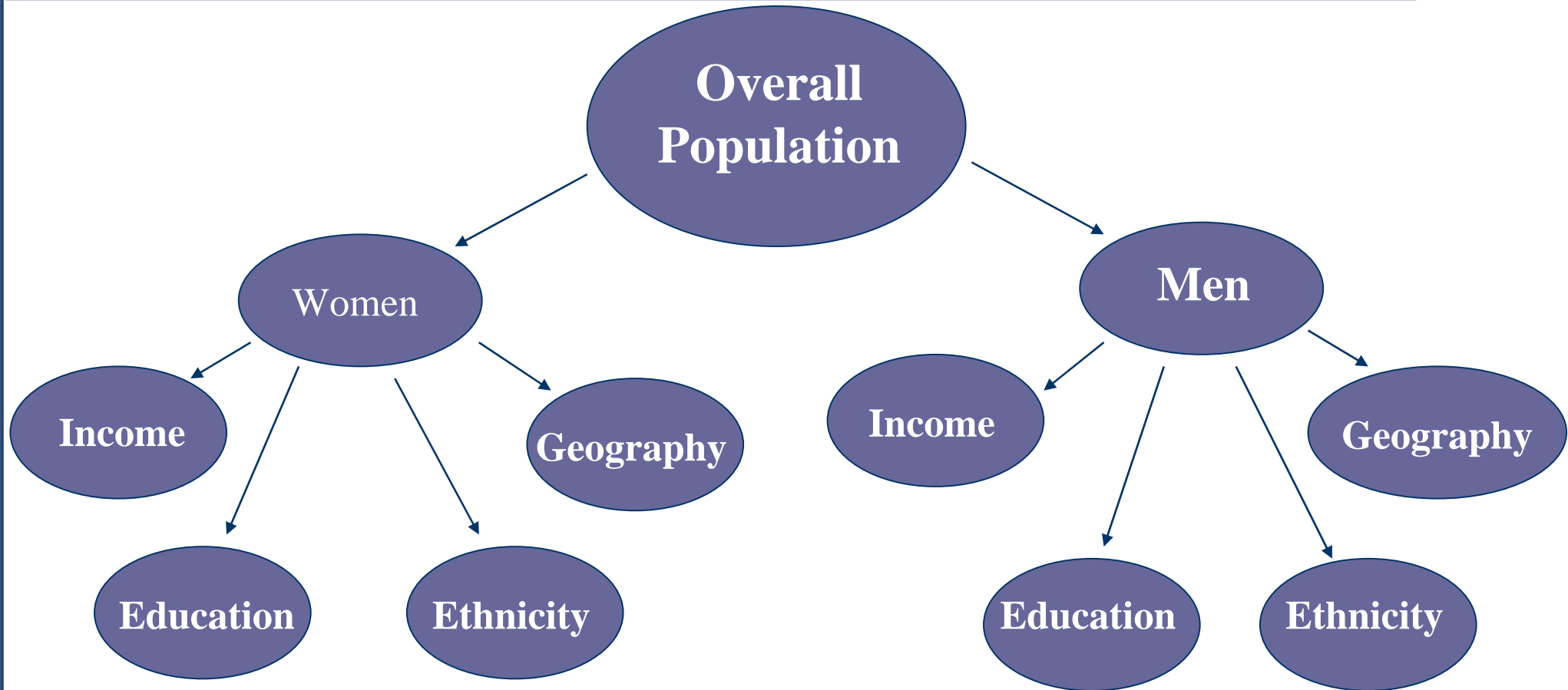
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- The Ontario Women's Health Equity Report can serve as a model for
  - incorporating gender and equity as an integral component of improvement efforts;
  - focusing on the need to integrate efforts to improve population health and health care services;
  - building upon evidence-based analyses to provide new information on factors and pathways contributing to gender and socioeconomic differences in health outcomes.



# Assessing Equity

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# Health Indicator Measurement and Reporting: A Tool to Drive Change

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**Health indicator measurement and reporting provide essential tools for informing and monitoring efforts to:**

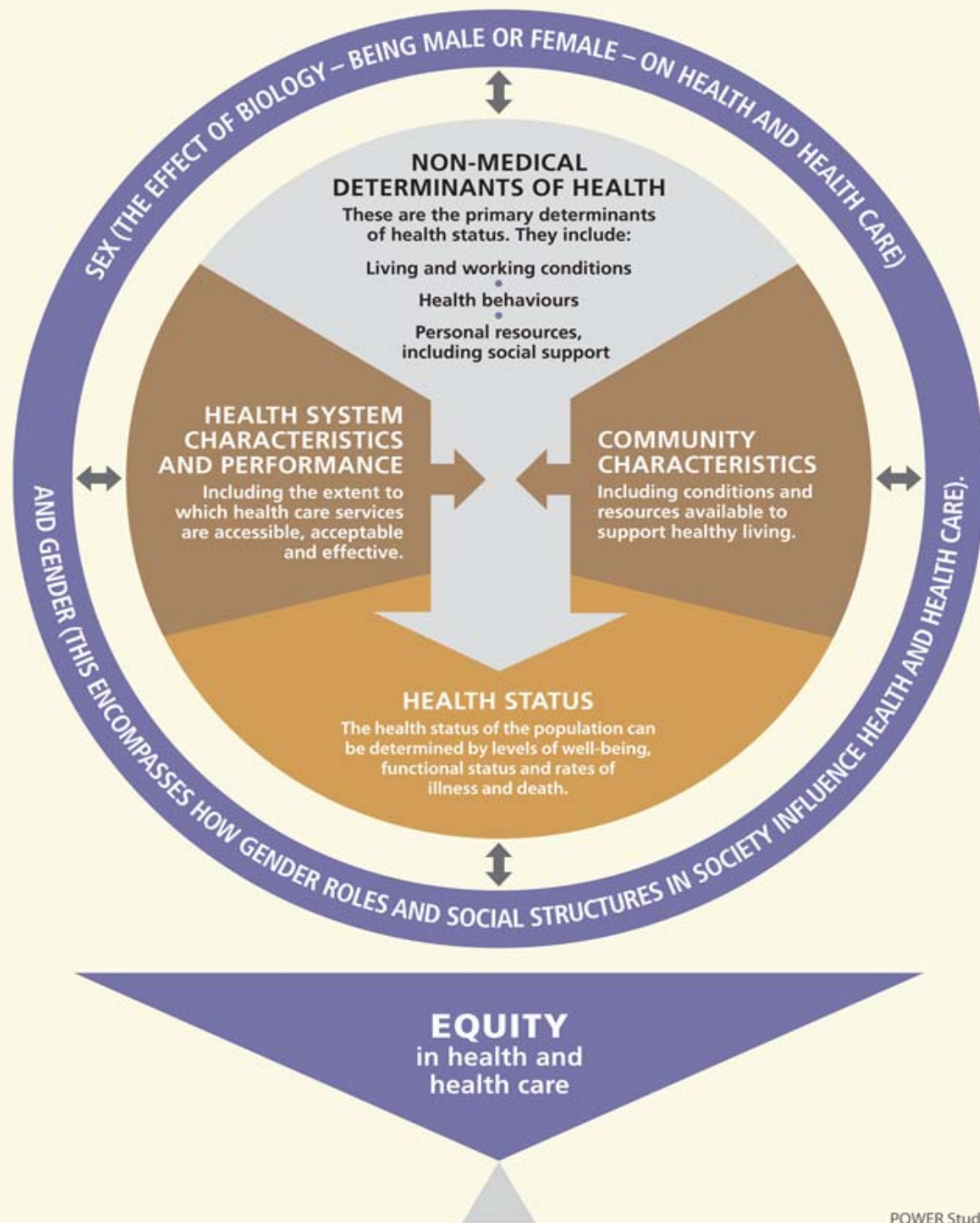
- Improve population health
- Improve access to quality and outcomes of health care services
- Reduce inequities in health and health care

# Effecting Change . . .

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- Reporting by itself does not result in improvement.
- For performance measurement and reporting to result in change it needs to be evidence-based, strategy driven, linked to a commitment for change by health system leaders and providers, and mechanisms for accountability.

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- POWER Study Women's Health Equity Framework



# POWER Study Gender and Equity Health Indicator Framework

# Cancer Chapter Framework

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- Developed by members of the Cancer Working Group
- Include major causes of cancer-related morbidity and mortality in women including:
  - Women-specific tumours: breast, ovarian, cervix and endometrial
  - Non-gender specific tumours: lung and colorectal
- Cover continuum of care from prevention through end-of-life care
- Process and outcome measures eligible provided feasible to calculate from administrative data available in Ontario

# Process for Indicator Selection

Framework for cancer chapter developed by working group

Literature review to identify candidate indicators

No. of indicators identified from literature:  
**427**

Short-listing of candidate indicators by working group members with respect to importance and feasibility of measurement using admin data

No. of indicators presented to TEP:  
**47**

Technical expert panel (TEP)

No. of indicators selected by panel:  
**31**

Analysis with stratification by sex, income & age

# Cancer Chapter Indicators

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- General Indicators (3 indicators)
- Screening Indicators (5 indicators)
- Colorectal Cancer (4 indicators)
- Lung Cancer (3 indicators)
- Breast Cancer (5 indicators)
- Gynecological Cancers (4 indicators)
- End of Life Care (5 indicators)



# Data Sources

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Most recently available data (2003-2005) from:

- Ontario Cancer Registry
- Registered Persons Database
- Ontario Health Insurance Plan Database
- Canadian Institutes of Health Information Database
- CytoBase
- Ontario Breast Cancer Screening Program
- National Ambulatory Care Reporting System
- Ontario Home Care Administrative System

All analyses stratified by sex, age, income and region  
sample size permitting

# Cancer Chapter - LHIN-level data availability

General indicators	Lhin	By income	By age
Incidence	Colorectal, lung, breast, cervical, uterine and ovarian	Colorectal, lung, breast, cervical, uterine and ovarian	Incidence is not available by age at the LHIN level
Five year survival	Colorectal, lung, breast, uterine and ovarian	Colorectal, lung, breast	Survival is not available by age at the LHIN level
Surgical Wait times	Bowel resection, mastectomy	Bowel resection, mastectomy	Bowel resection, mastectomy

## Screening Indicators

FOBT screening for colorectal cancer	√	√	√
Mammography screening	√	√	√
Pap screening	√	√	√
Pap follow-up for low-grade lesions	√	√	
Pap follow-up for unsatisfactory results	√		

# Cancer Chapter - LHIN-level data availability

<b>Colorectal cancer indicators</b>	<b>Lhin</b>	<b>By income</b>	<b>By age</b>
Sphincter sparing procedures	√		
Referral to medical oncology	√	√	
Referral to radiation oncology	√		
Follow-up colonoscopy	√		
<b>Lung Cancer indicators</b>			
Lung resection surgery for NSCLC	√	√	√ (limited to adults under age 80)
Post surgical chemotherapy for NSCLC	√		
Chemotherapy for SCLC	√		

# Cancer Chapter - LHIN-level data availability

<b>Breast cancer indicators</b>	<b>Lhin</b>	<b>By income</b>	<b>By age</b>
Breast conserving surgery	√	√	√
Axillary lymph node dissection	√	√	√
Radiation therapy after breast conserving surgery	√	√	√
Assessment by medical oncology	√	√	√
Annual surveillance mammography	√	√	√
<b>Gynecological Cancer indicators</b>			
Primary ovarian surgery by a gynecologic oncologist	√		
Post-operative chemotherapy for ovarian cancer	√		
Reoperation rates for ovarian cancer			
Referral to a gynecologic oncologist for staging for uterine cancer	√		

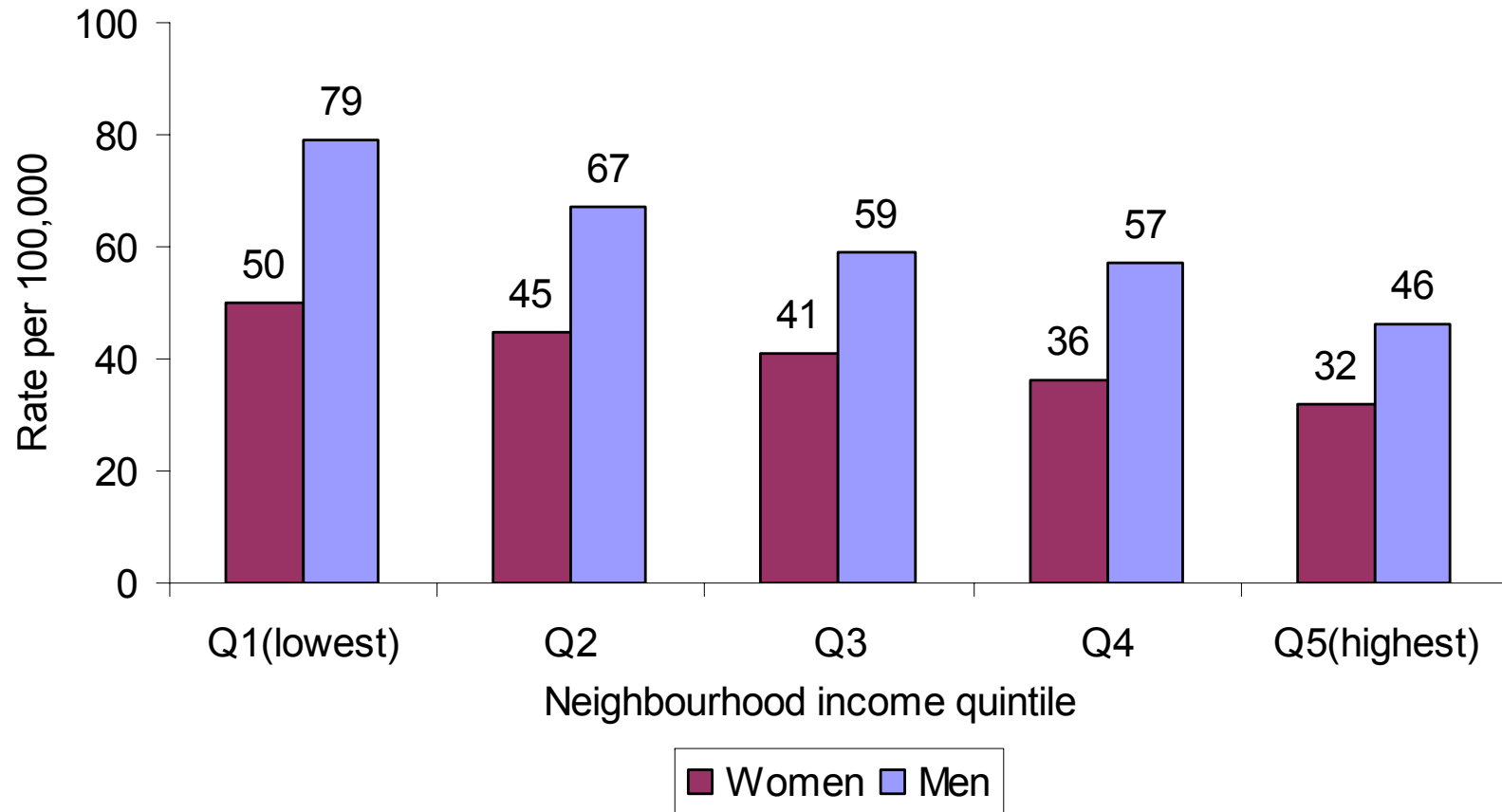
# Cancer Chapter - LHIN-level data availability

End of Life care indicators	Lhin	By income	By age
Acute care bed death	Colorectal, lung, breast, uterine and ovarian	Lung, breast	Lung, breast
Emergency department visits in the last two weeks of life	Colorectal, lung, breast, uterine and ovarian	Lung, breast	Lung, breast
Chemotherapy in the last two weeks of life	Lung, breast		
Home care in the last six months of life	Lung, breast	Lung, breast	Lung, breast
Physician house calls in the last two weeks of life	Colorectal, lung, breast,	Lung, breast	Lung, breast

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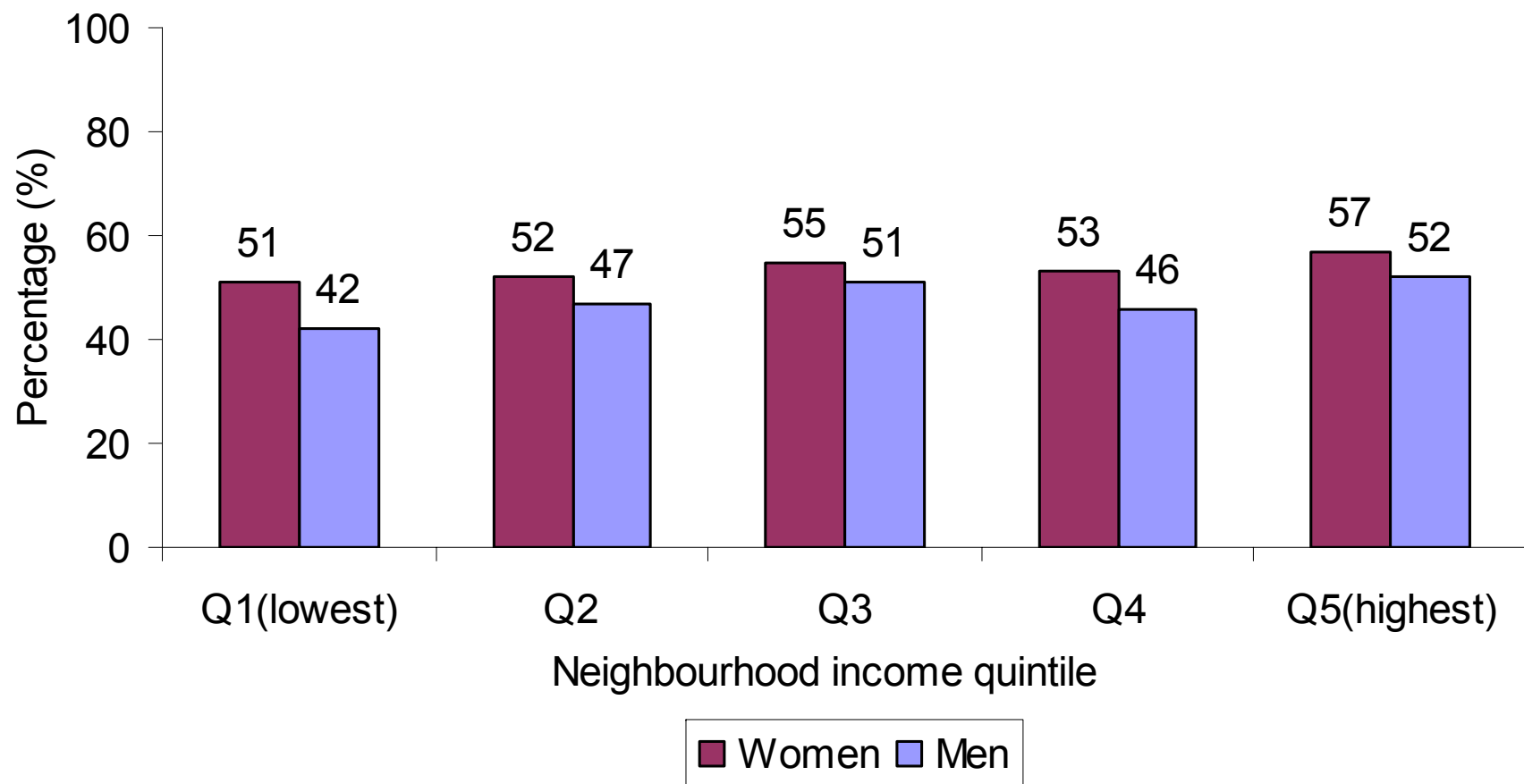
- General Indicators

# Age-standardized incidence of lung cancer per 100,000 population, by sex and neighbourhood income quintile, 2004/05



Data sources: Ontario Cancer Registry (OCR); Registered Persons Database (RPDB); Statistics Canada 2001 Census

# Age-standardized five-year survival rate (percentage) among patients with colorectal cancer, by sex and neighbourhood income quintile<sup>^</sup>



Data sources: OCR; RPDB; Statistics Canada 2001 Census

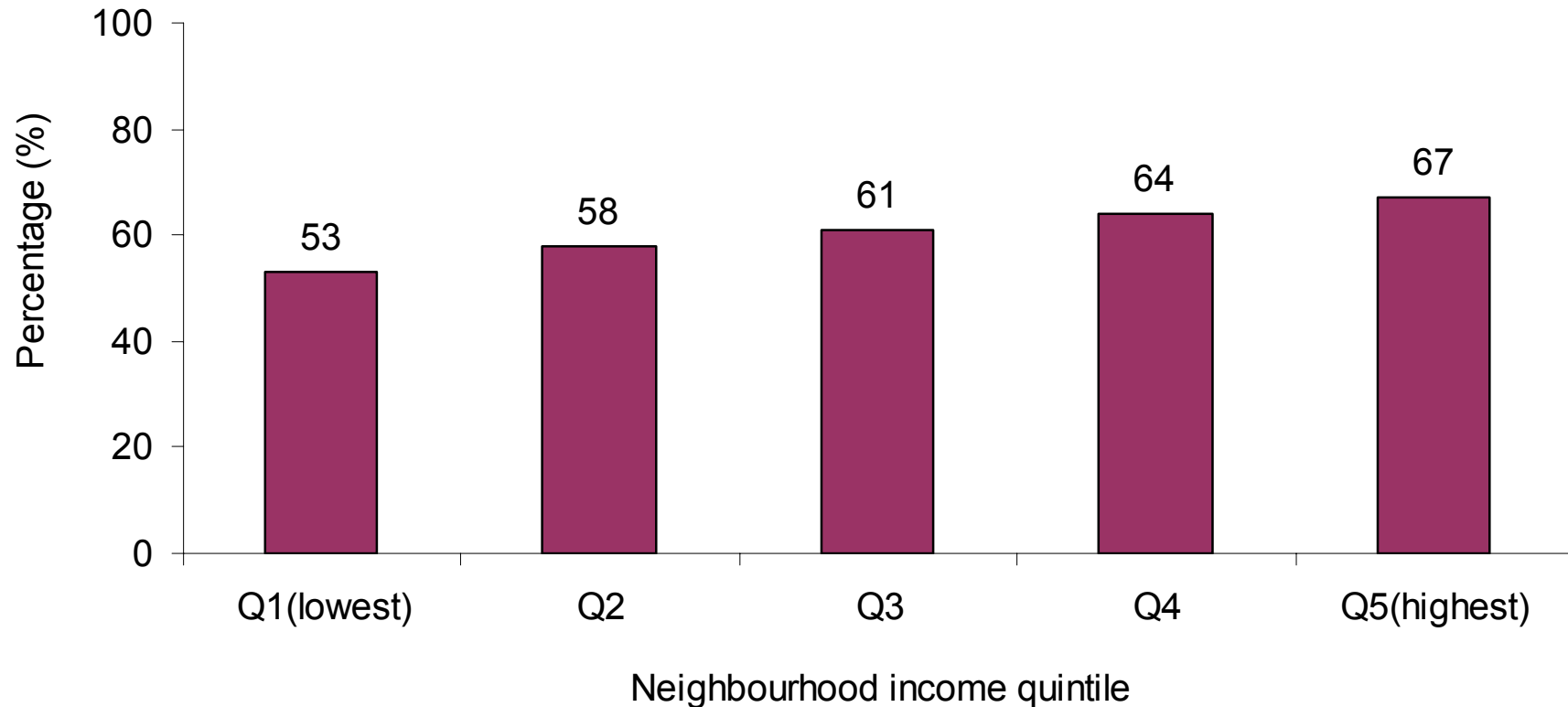
<sup>^</sup> For cases diagnosed in 2000/2001



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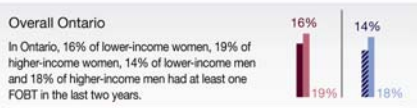
- Screening Indicators

# Age-standardized percentage of screen-eligible<sup>^</sup> women who had a mammogram in the last two years, by neighbourhood income quintile, 2005/06

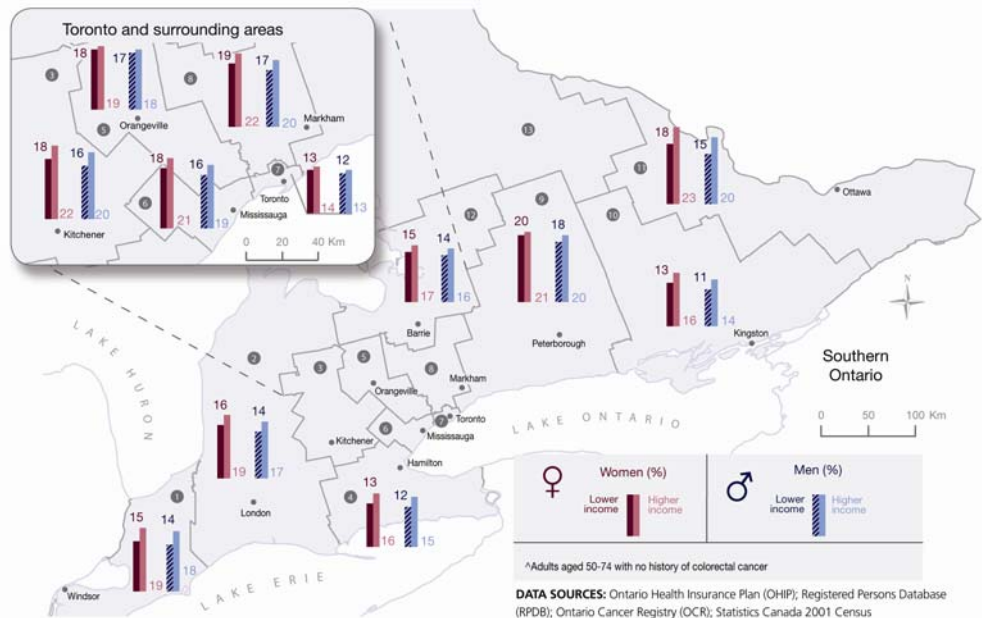
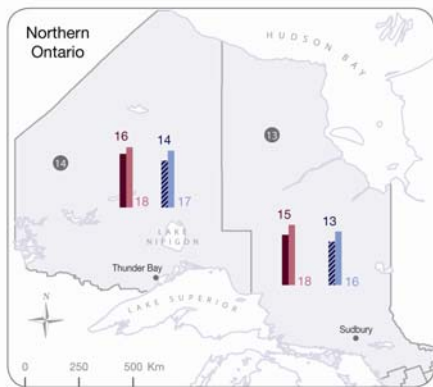


Data sources: Ontario Breast Screening Program (OBSP); OCR; OHIP; RPDB;  
Statistics Canada 2001 Census

<sup>^</sup>Women aged 50-69 with no history of breast cancer



Note: See Appendix 4.3 for details about neighbourhood income quintile calculation

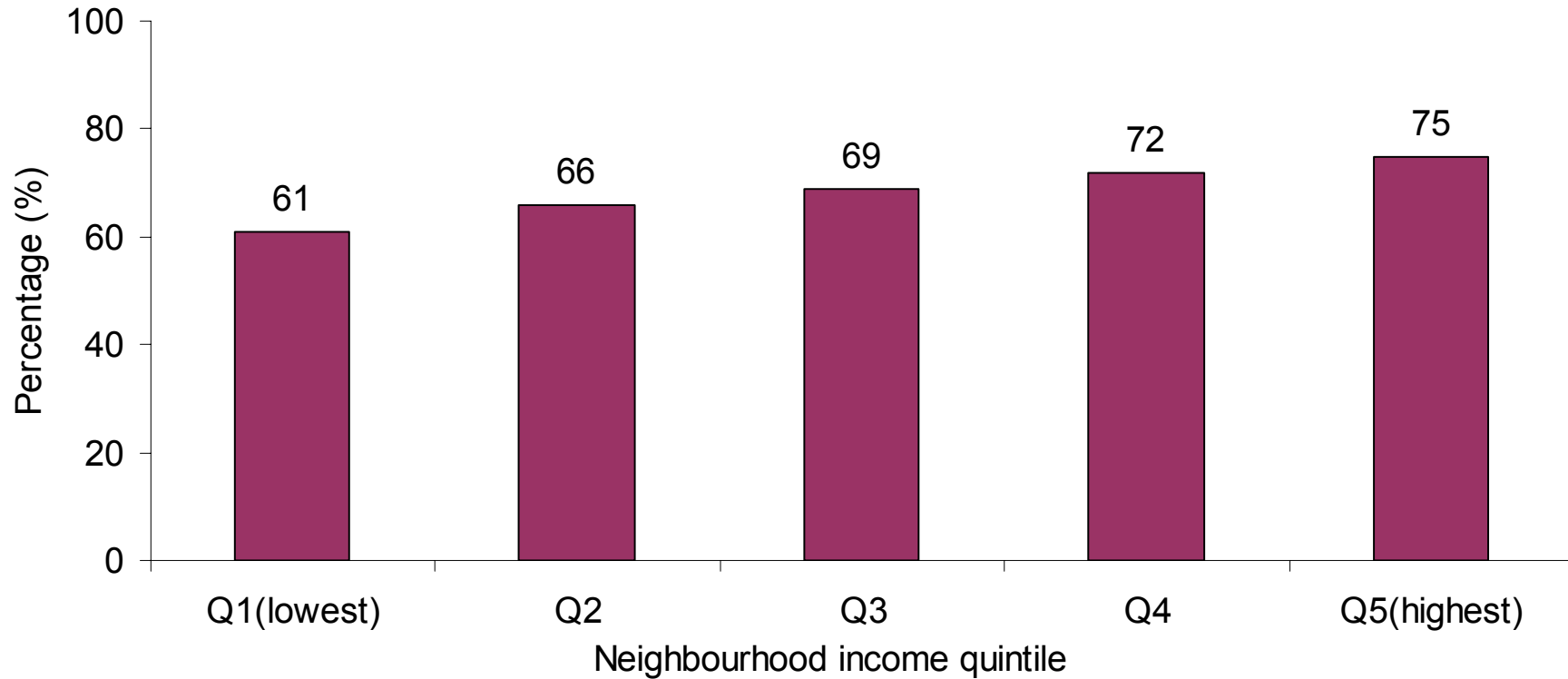


\*Adults aged 50-74 with no history of colorectal cancer

**DATA SOURCES:** Ontario Health Insurance Plan (OHIP); Registered Persons Database (RPDB); Ontario Cancer Registry (OCR); Statistics Canada 2001 Census

# Age-standardized percentage of screen eligible adults who received one or more fecal occult blood tests (FOBT) in the last two years, by sex, neighbourhood income and LHIN

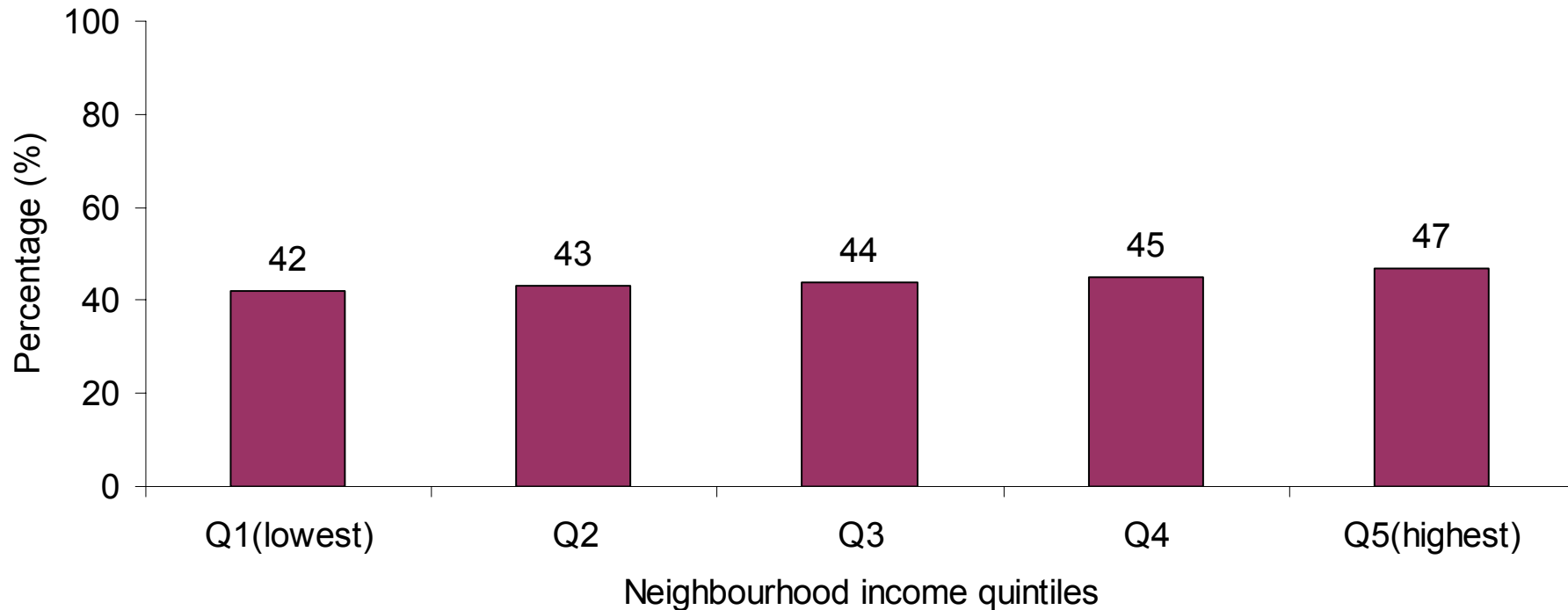
# Age-standardized percentage of screen-eligible<sup>^</sup> women who had at least one Pap test in the last three years, by neighbourhood income quintile, 2004/05



Data sources: CytoBase; OCR; OHIP; RPDB; CIHI-DAD; Statistics Canada 2001 Census

<sup>^</sup>Women aged 18-70 with no history of cervical cancer or prior hysterectomy

# Age-standardized percentage of women who had a Pap test that showed a low grade lesion<sup>^</sup> who had a repeat Pap test or colposcopy within 6 months of the initial abnormal test, by neighbourhood income quintile, 2004/05



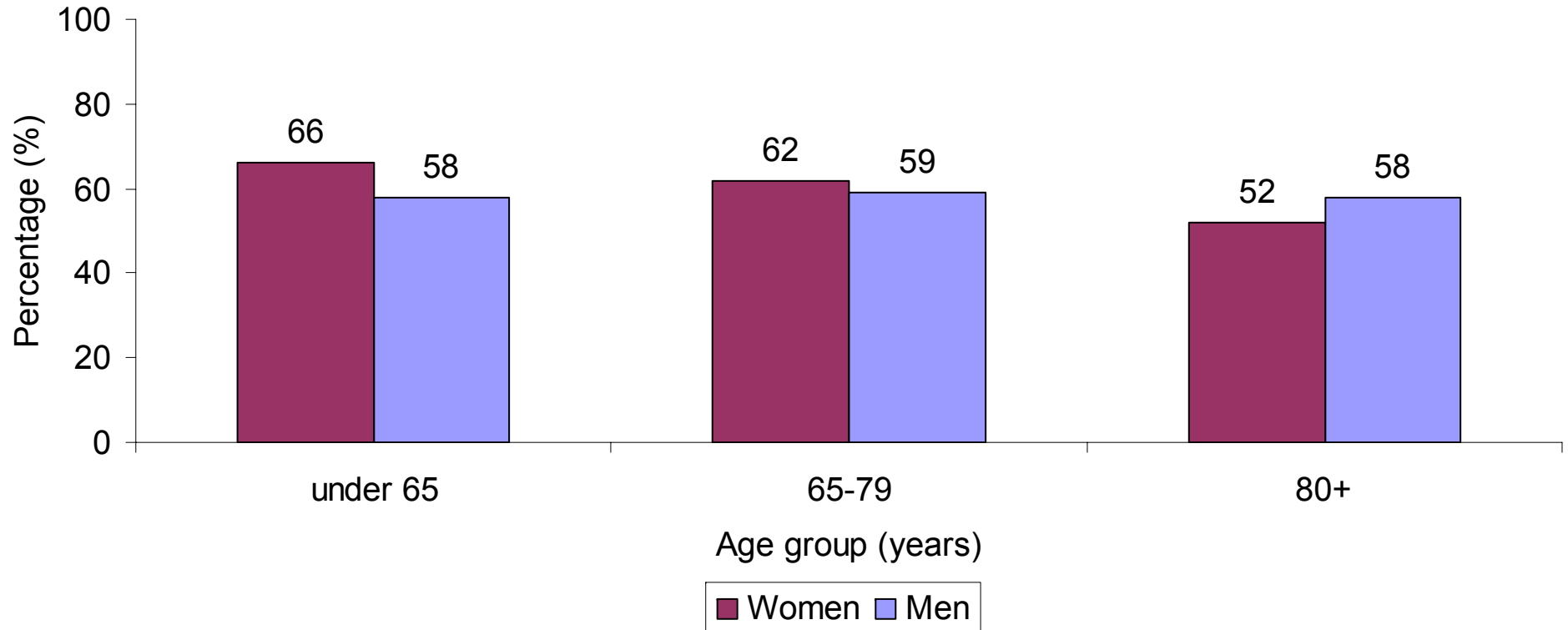
Data sources: CytoBase; OCR; OHIP; RPDB; CIHI-DAD; Statistics Canada 2001 Census

<sup>^</sup>Atypical squamous cells of undetermined significance (ASCUS) or low-grade squamous intraepithelial lesion (LGSIL)

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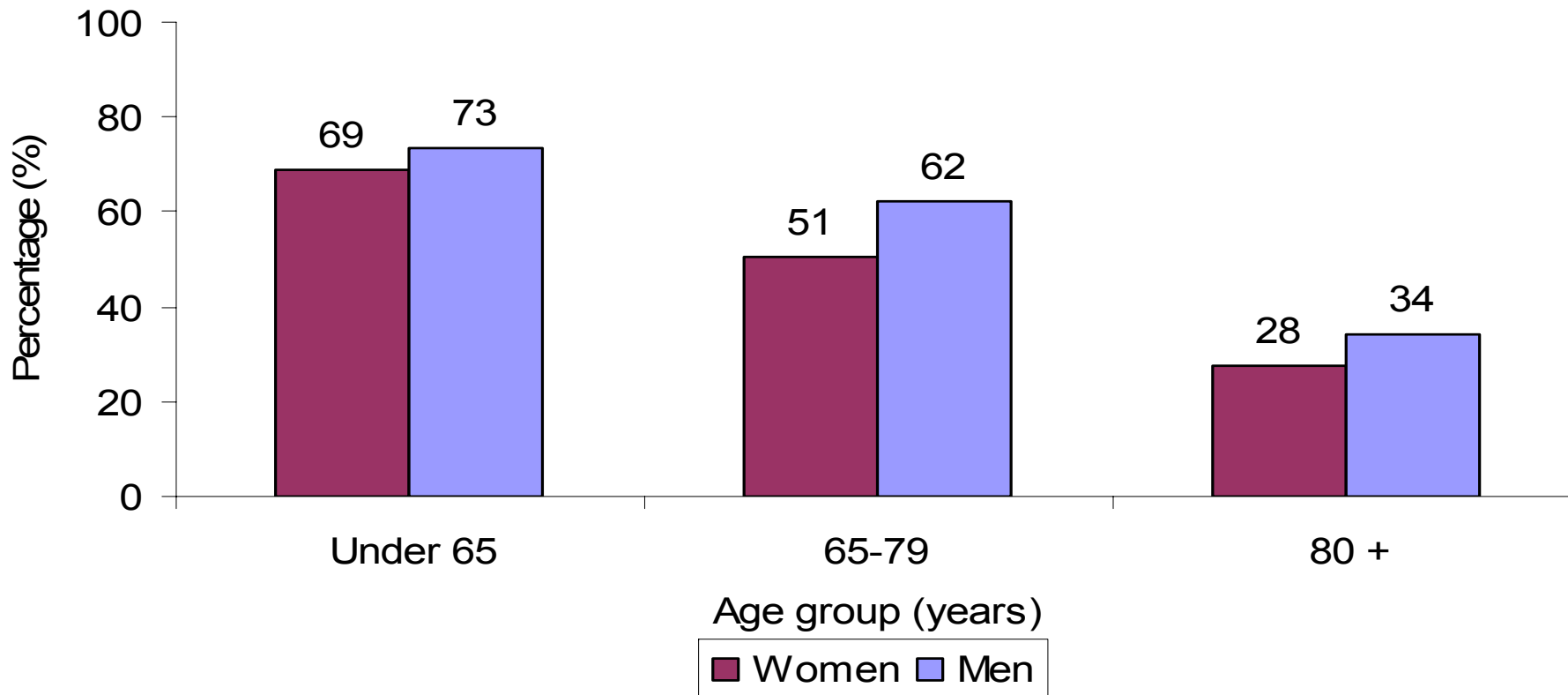
- Colorectal Cancer

# Percentage of patients with rectal cancer who received a sphincter-sparing procedure at the time of surgery, by sex and age, 2002/03 to 2003/04



Data sources: OCR; OHIP; RPDB; CIHI-DAD; ICES Physician Database (IPDB);  
Statistics Canada 2001 Census

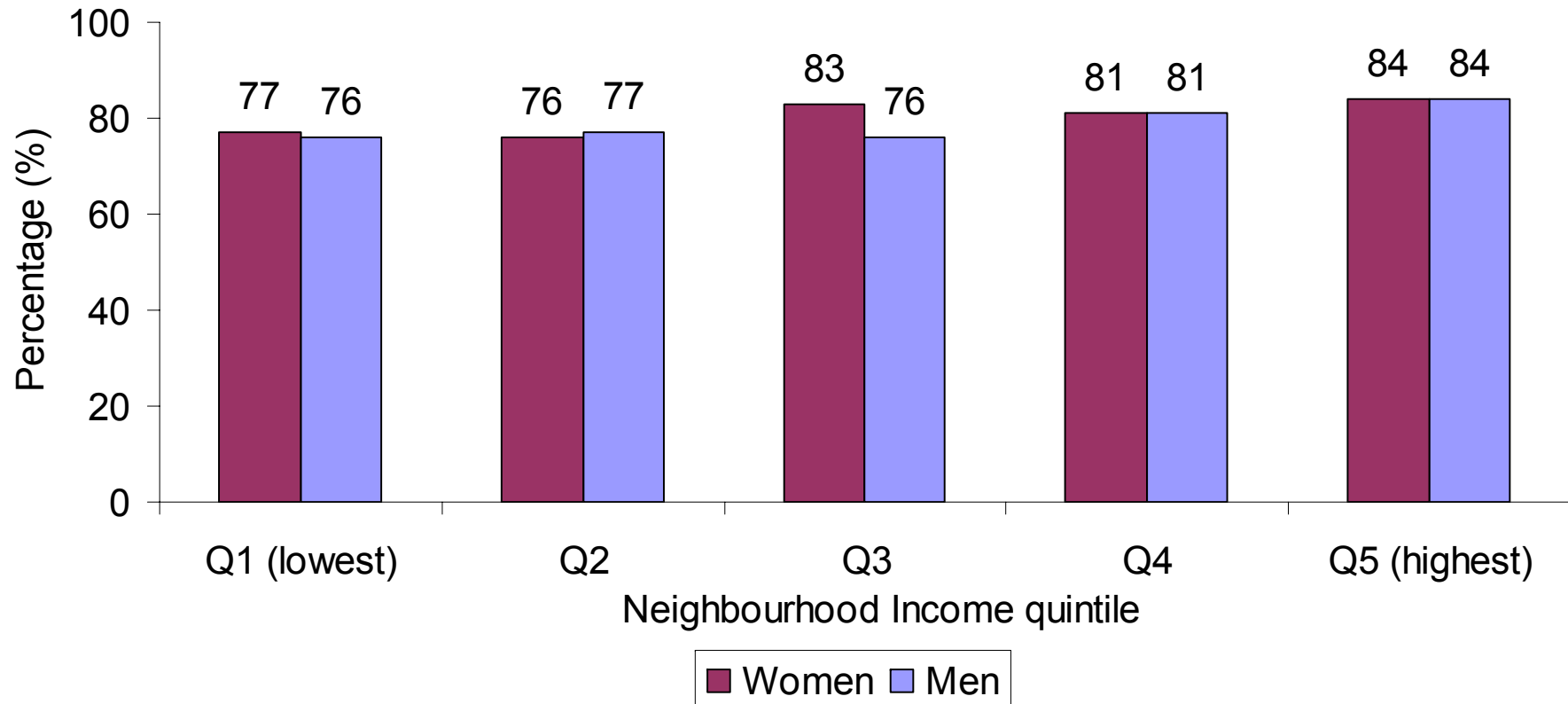
# Percentage of patients who underwent surgery for rectal cancer who had a consultation with a radiation oncologist within six months of diagnosis, by sex and age, 2002/03 to 2003/04



Data sources: OCR; OHIP; RPDB; IPDB



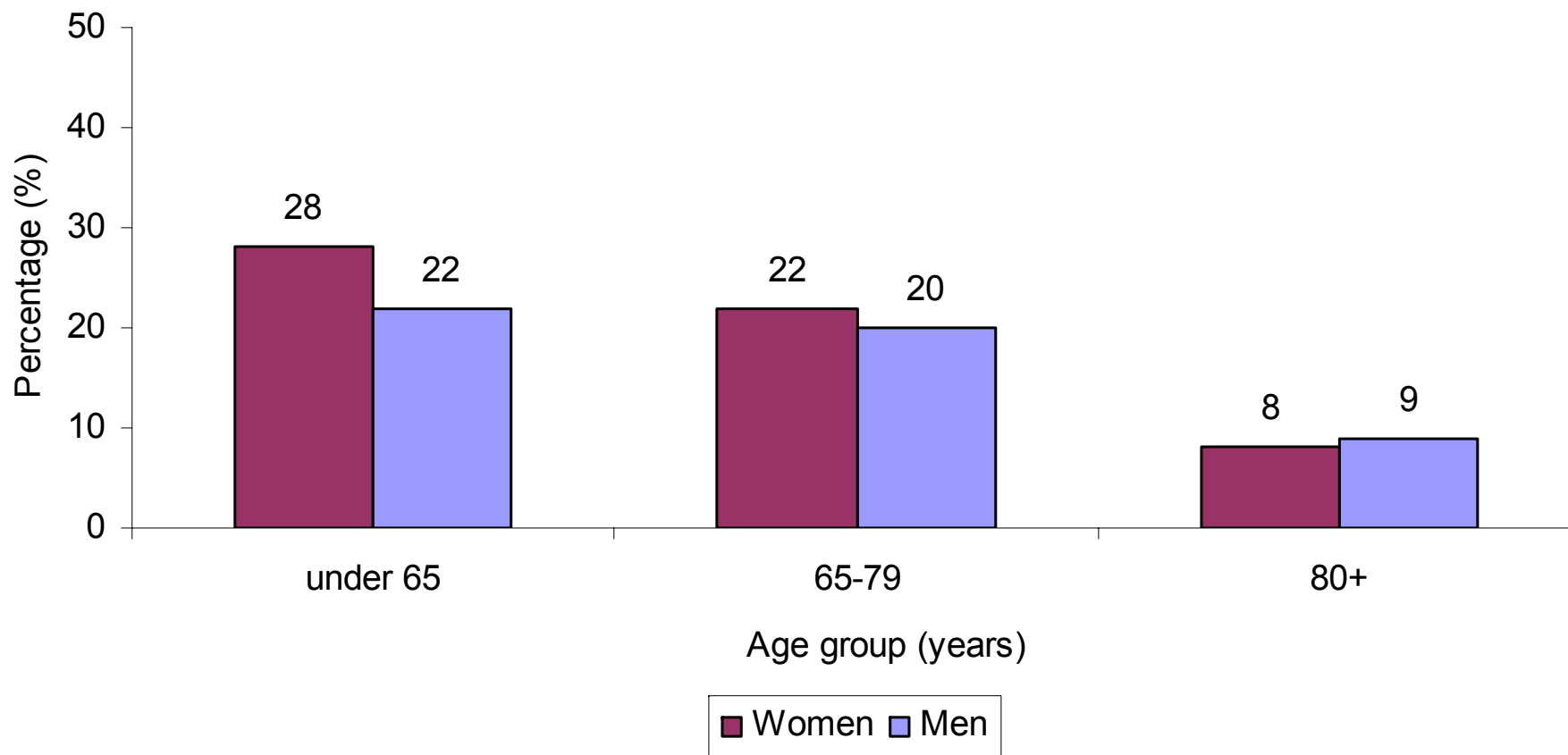
# Age-standardized percentage of colorectal cancer patients who received follow-up colonoscopy within 36 months following surgery, by sex and neighbourhood income quintile, 2002/03 to 2003/04



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- Lung Cancer

# Percentage of patients with non-small cell lung cancer who underwent lung resection, by sex and age, 2003/04 to 2004/05



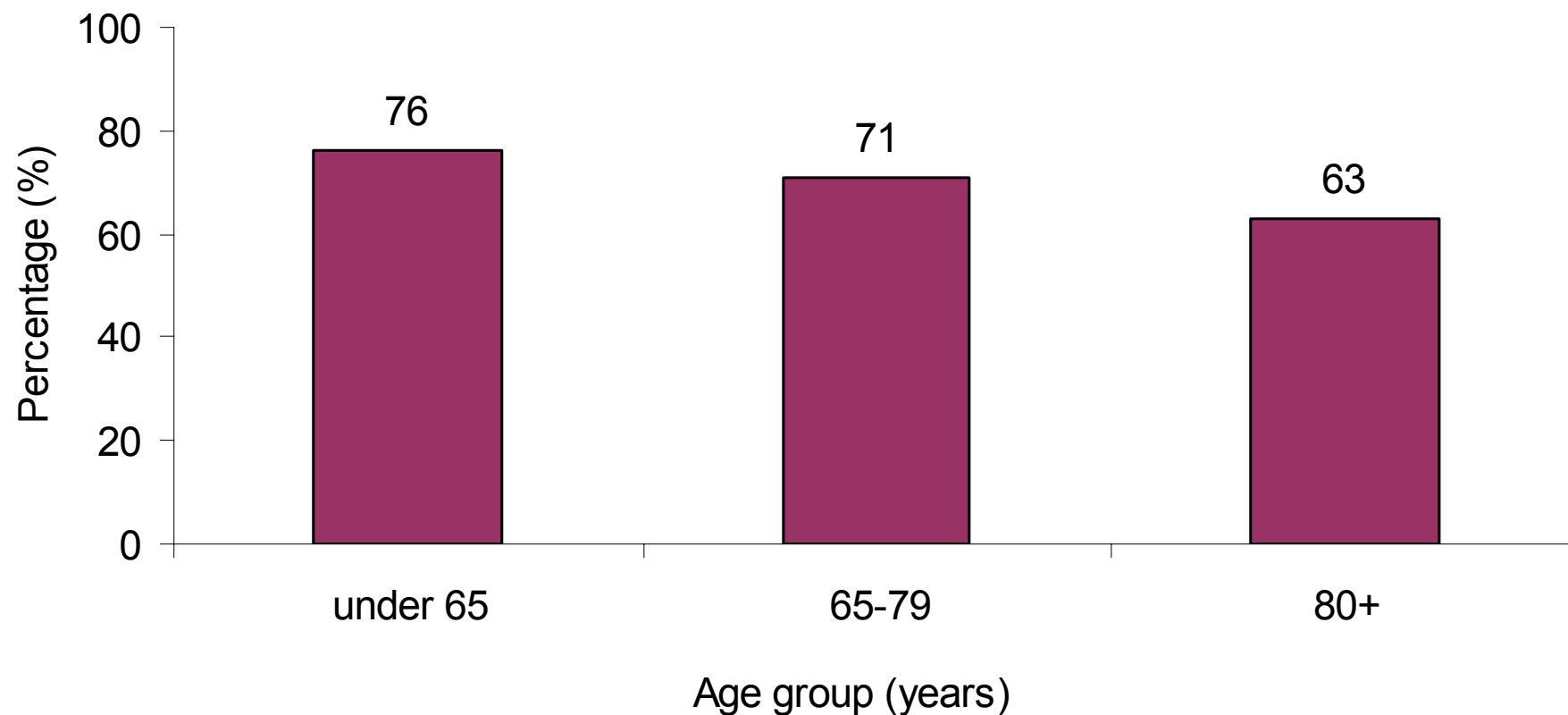
# Percentage of non-small cell lung cancer patients who received chemotherapy within six months after surgery, by sex and year, 2003/04 to 2004/05



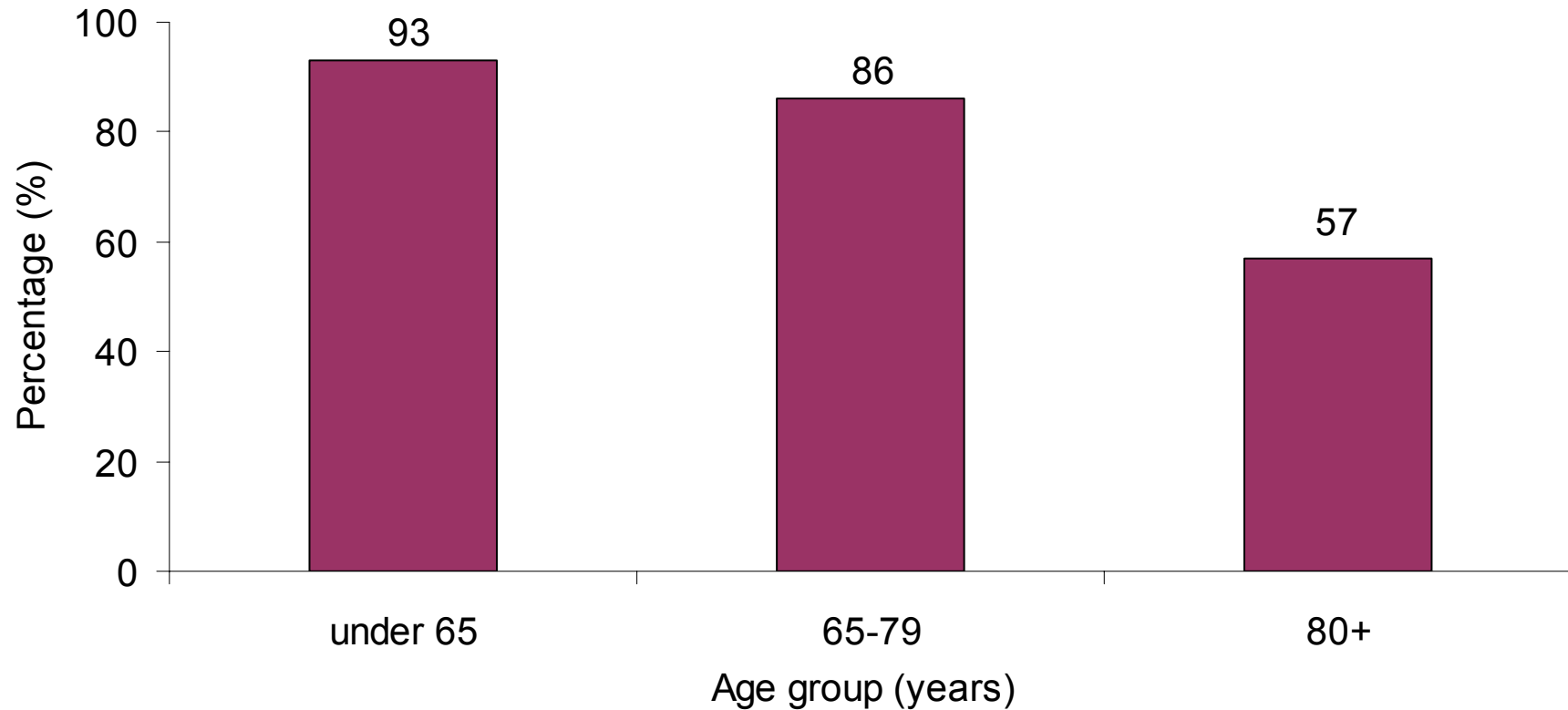
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- Breast Cancer

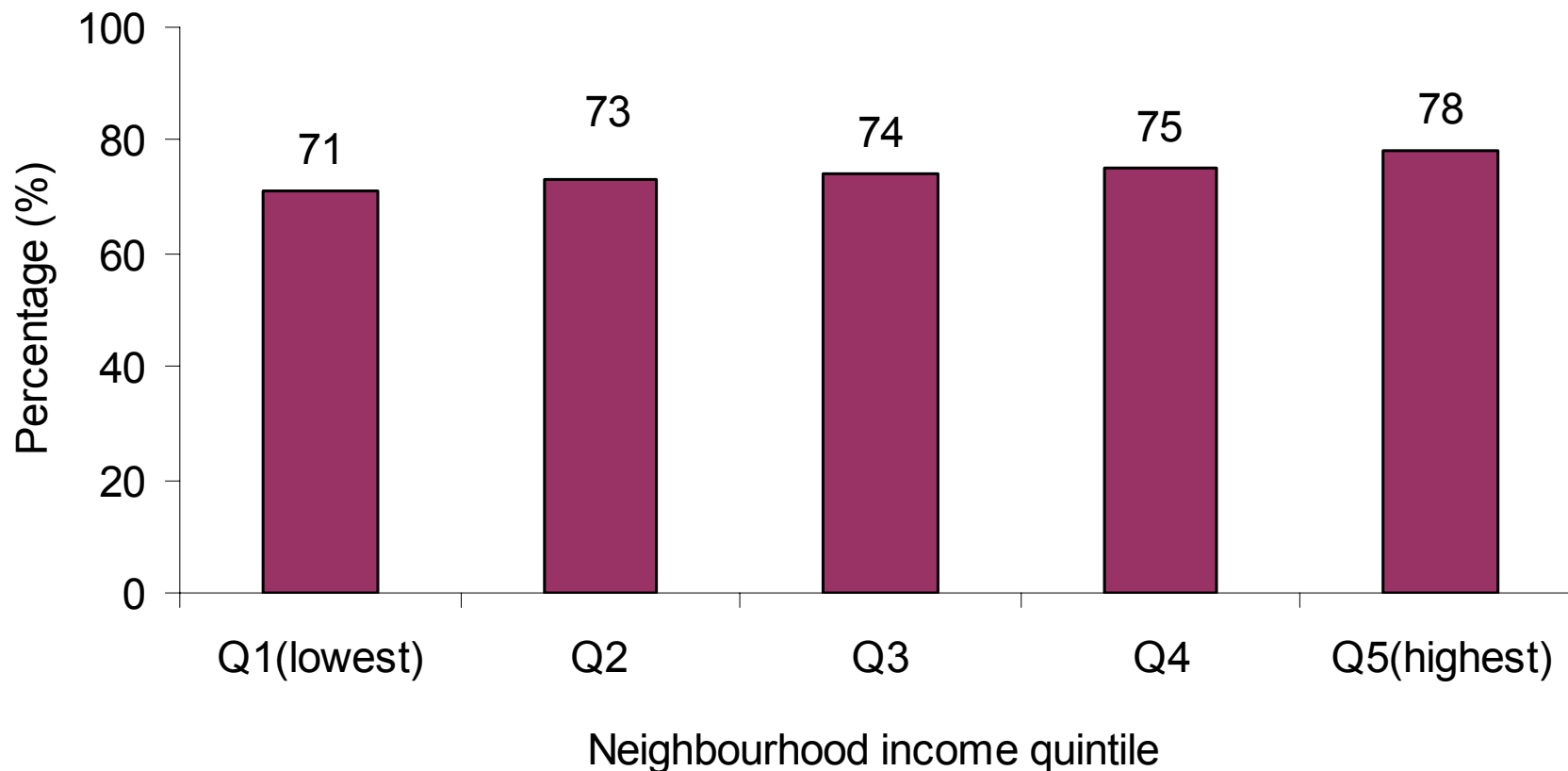
# Percentage of women who were diagnosed with breast cancer and had breast surgery, who received breast-conserving surgery, by age, 2003/04 to 2004/05



# Percentage of women who had breast cancer surgery who had an axillary lymph node dissection, by age, 2003/04 to 2004/05

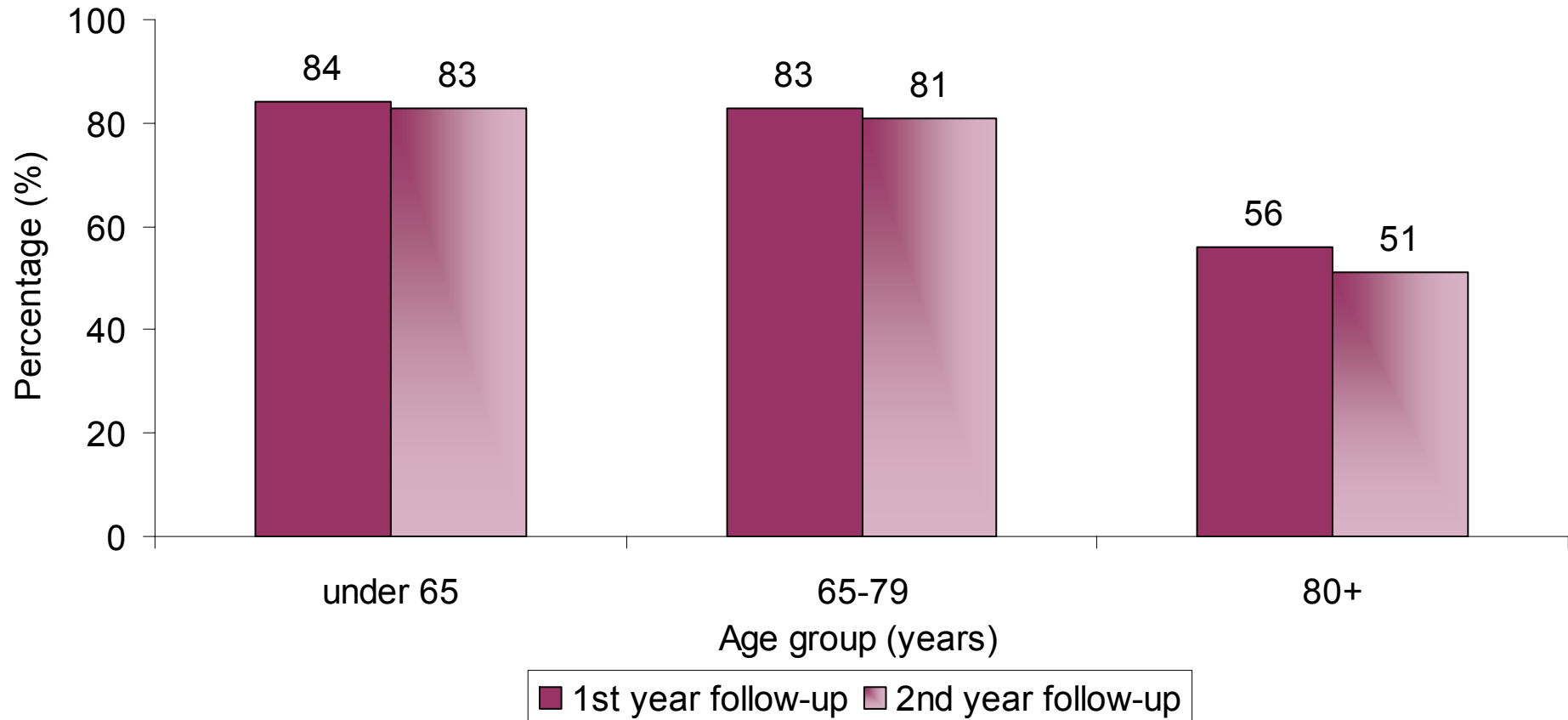


# Age-standardized percentage of women who received radiation therapy after breast-conserving surgery, by neighbourhood income quintile, 2003/04 to 2004/05





# Percentage of women with a history of breast cancer who had yearly surveillance mammography, by year of follow-up<sup>¥</sup> and age<sup>^</sup>



Data sources: OCR; OHIP; RPDB

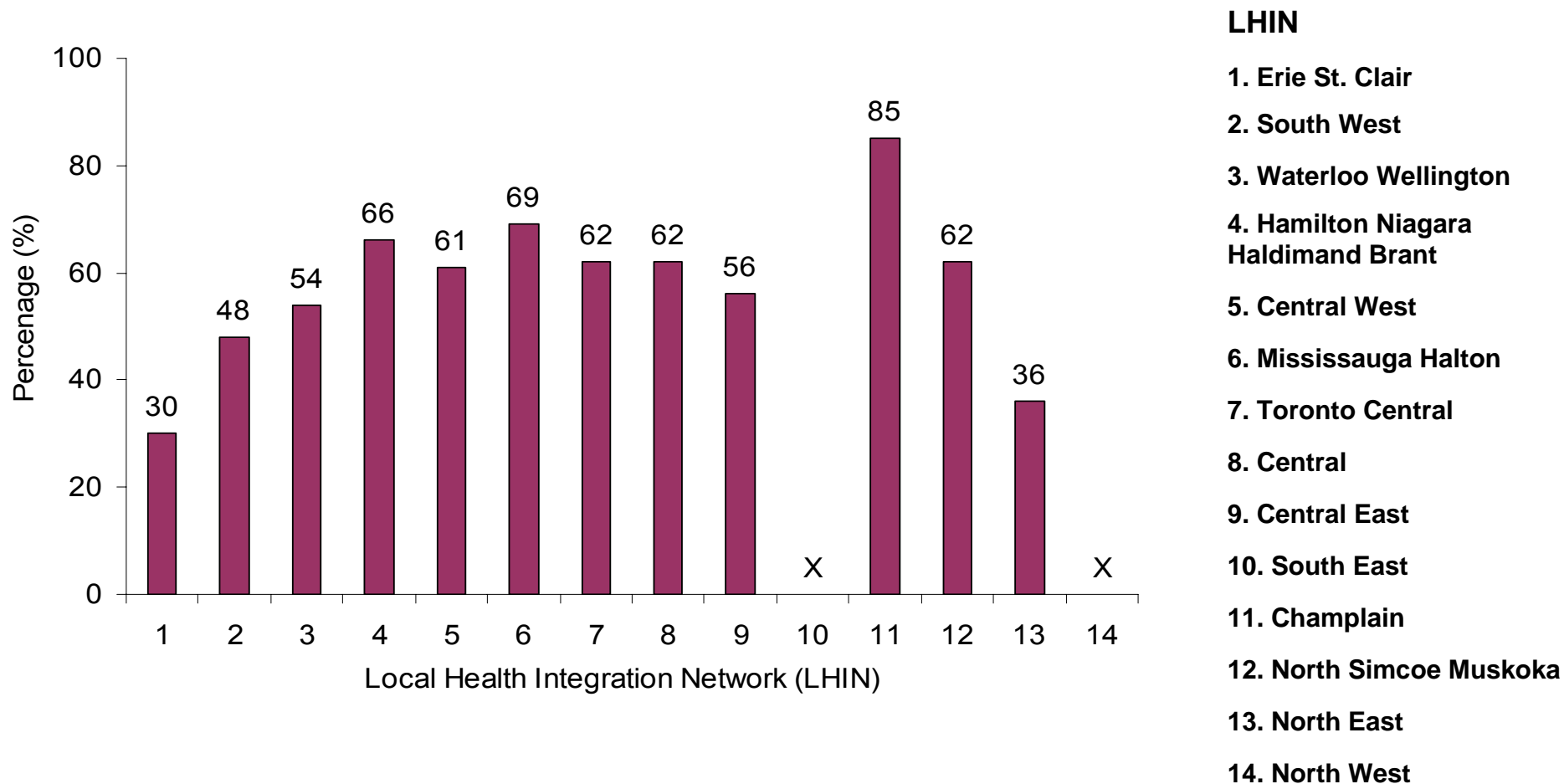
<sup>¥</sup> Assessment period for surveillance mammography started 6 months following diagnosis to allow time for treatment

<sup>^</sup> For cases diagnosed in 2003/04 to 2004/05

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- Gynecological Cancers

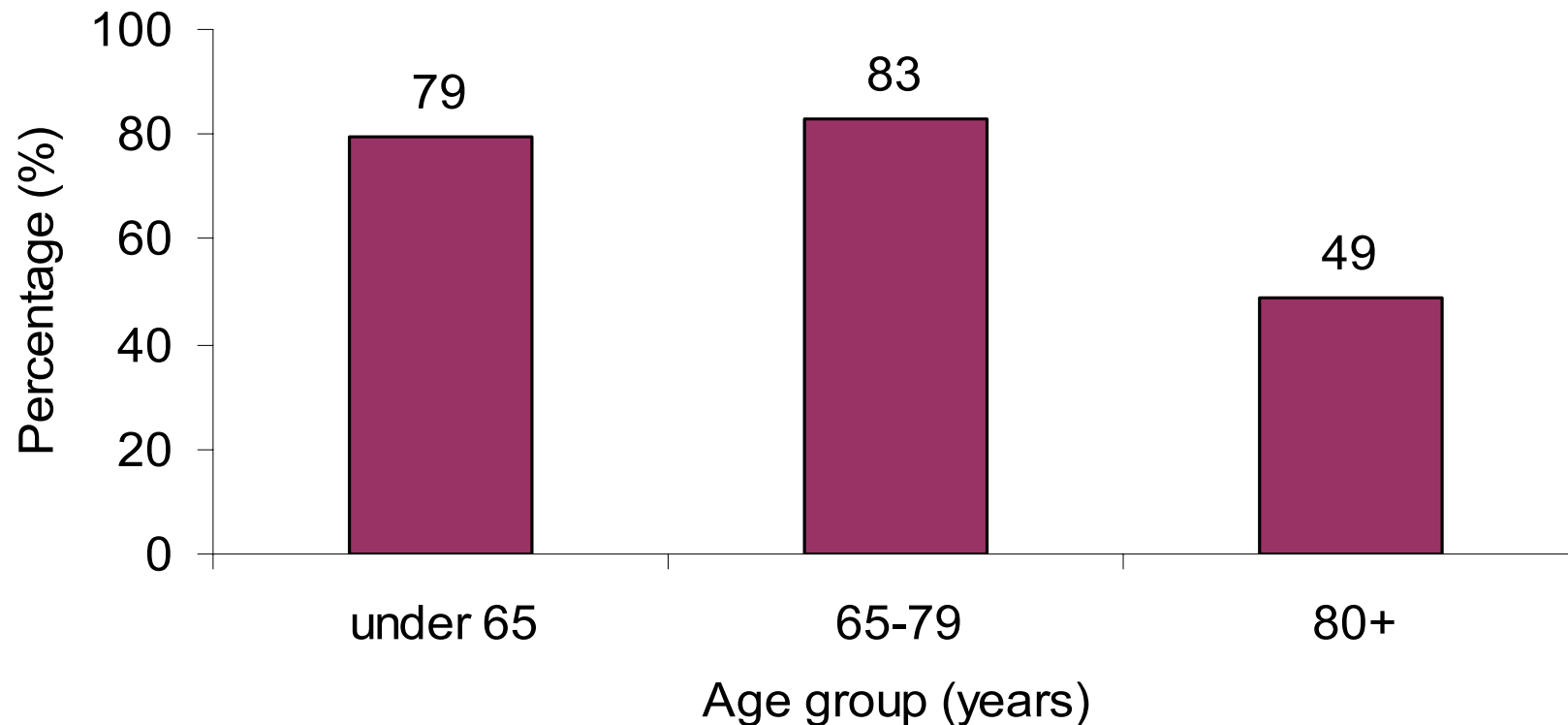
# Age-standardized percentage of women who underwent primary ovarian cancer surgery by a gynecologic oncologist, by LHIN, 2003/04 to 2004/05



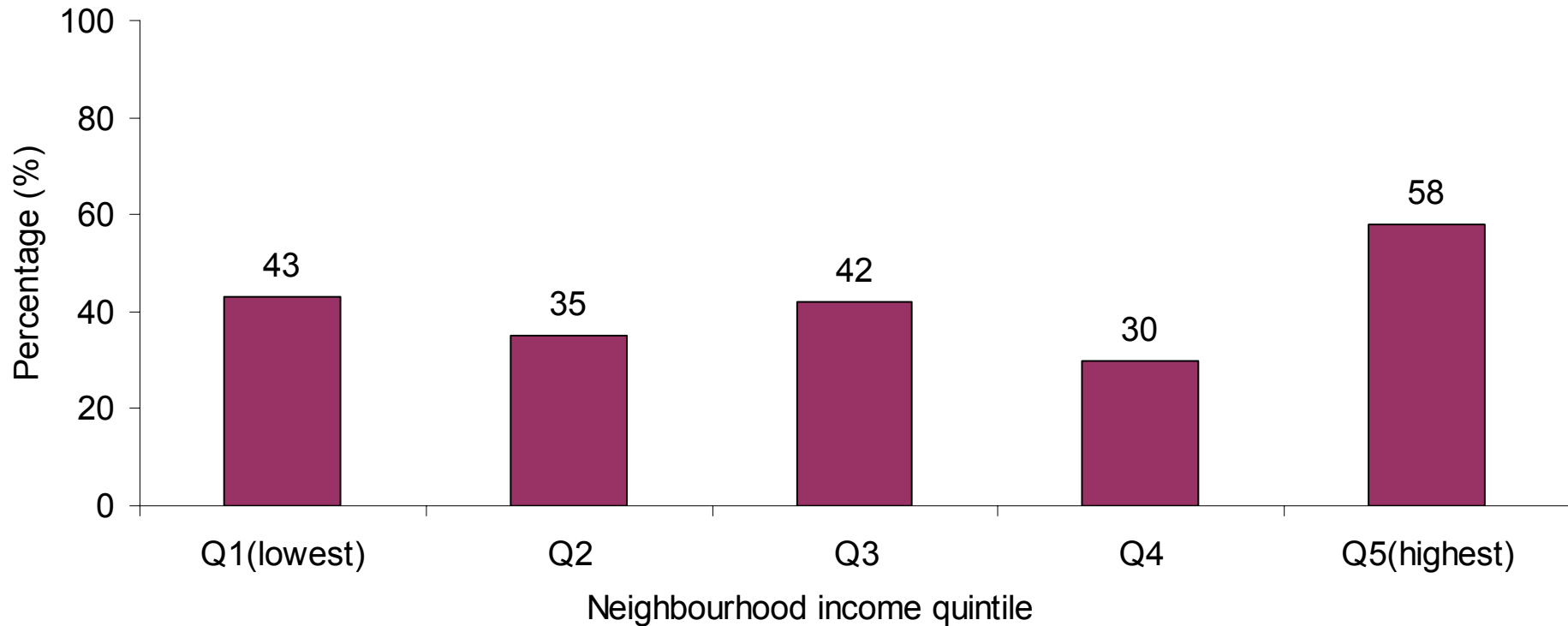
Data sources: OCR; CIHI-DAD; OHIP; RPDB; IPDB

X Data not shown due to small sample size

# Percentage of women with ovarian cancer who received postoperative chemotherapy within four months after surgery, by age, 2003/04 to 2004/05



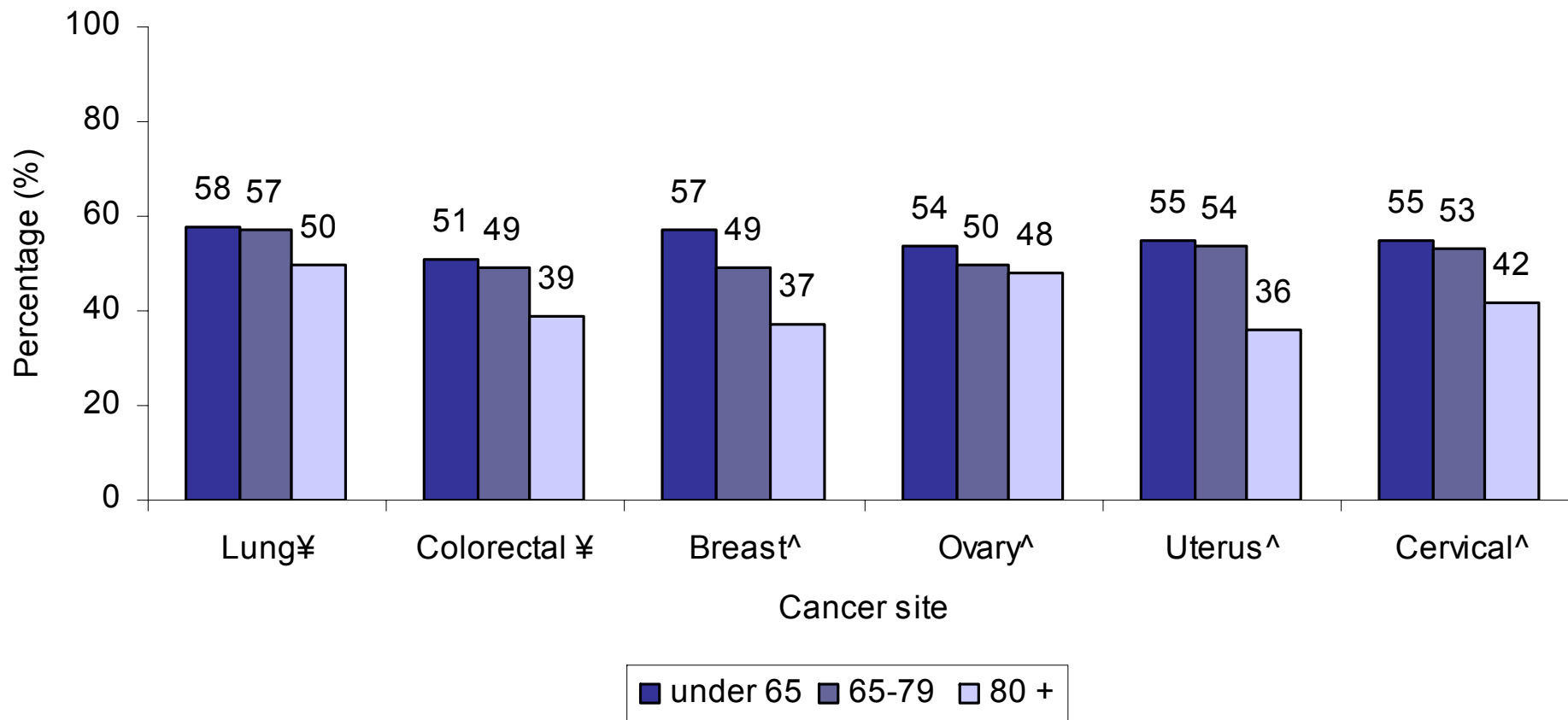
# Age-standardized percentage of women with certain high-risk histologies on biopsy who were referred to a gynecologic oncologist for a staging procedure, by neighbourhood income quintile, 2003/04 to 2004/05



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- End of Life Care

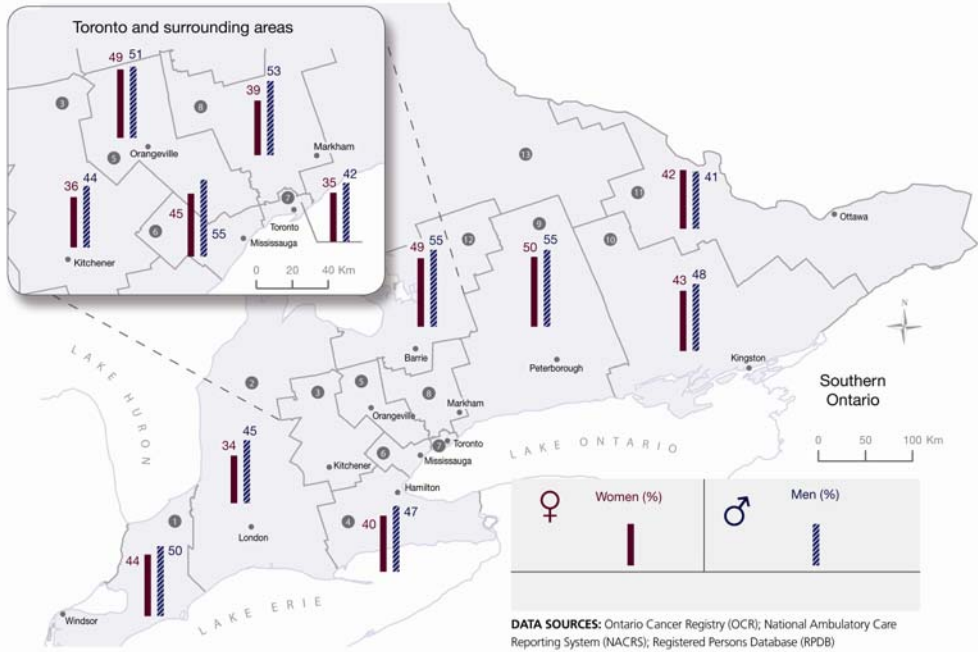
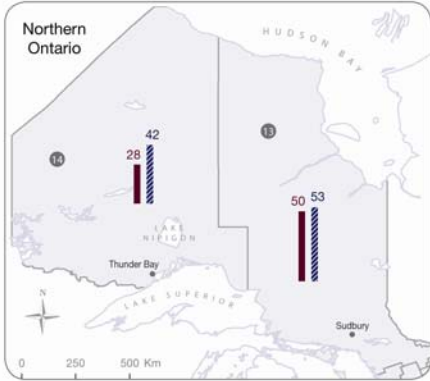
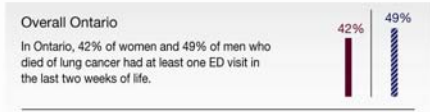
# Percentage of patients with cancer who died in acute care beds, by age and cancer site, 2003 to 2004



Data sources: OCR; CIHI-DAD; RPDB

¥ Rates are in women and men

^ Rates are in women only

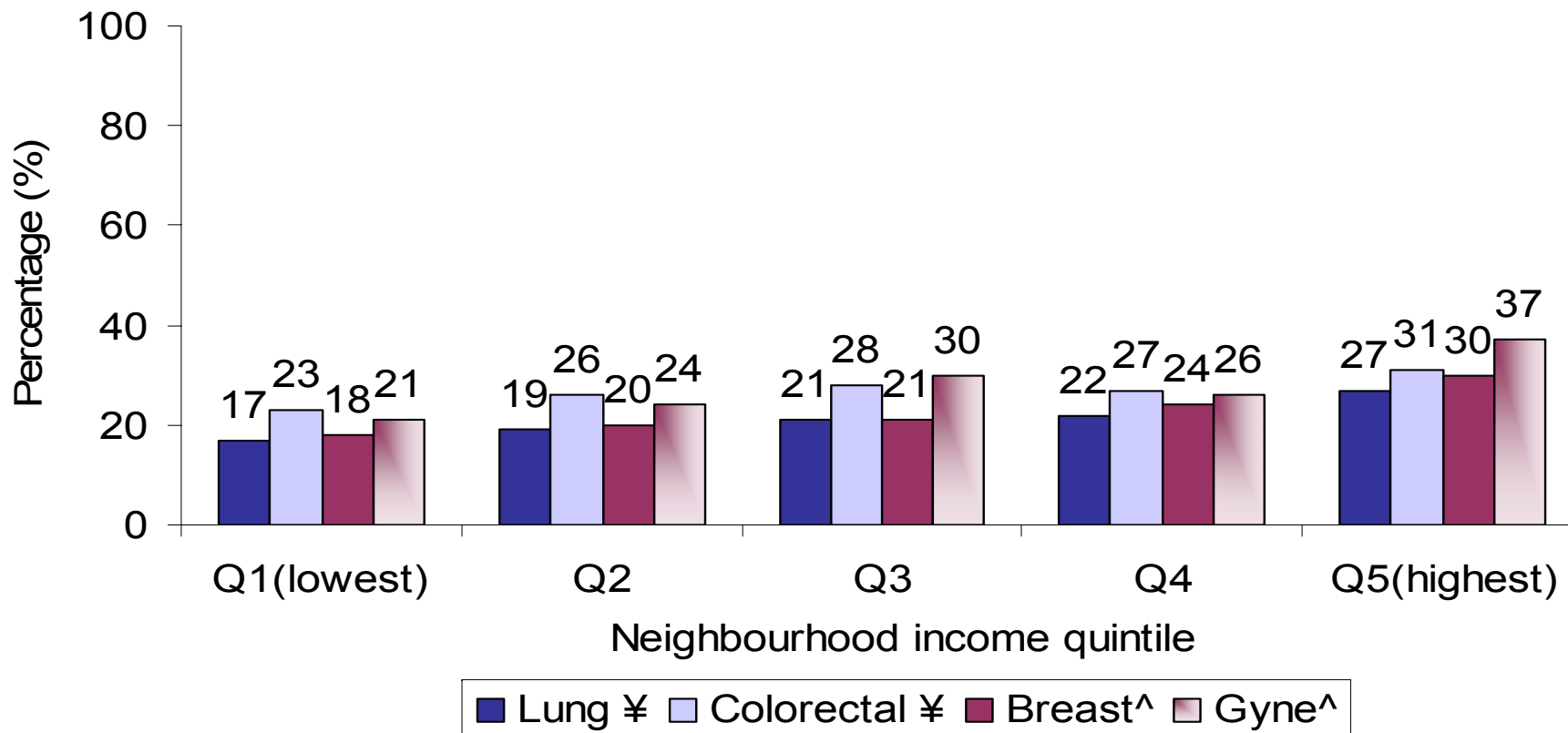


DATA SOURCES: Ontario Cancer Registry (OCR); National Ambulatory Care Reporting System (NACRS); Registered Persons Database (RPDB)

# Age-standardized percentage of patients who died of lung cancer who had at least one emergency department visit in the last two weeks of life, by sex and LHIN



# Age-standardized percentage of patients who died of cancer who had one or more physician house calls in the last two weeks of life, by neighbourhood income quintile, 2003 to 2004



Data sources: OCR; Ontario Home Care Administrative System (OHCAS); OHIP; RPDB;  
Statistics Canada 2001 Census

¥ Rates are in women and men

^ Rates are in women only

# Study Limitations

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- Data sources created for administrative purposes not research
- Lack of precise staging data and data on patient preferences
- Limited data on outcomes
- Data timeliness
- Ecologic level SES variable

# Conclusions

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- Cancer screening rates in Ontario remain below target and are especially low in low-income communities
- Follow-up of abnormal Pap tests is suboptimal
- It is important to look at differences in care between subgroups of individuals:
  - Income is an important determinant of screening, but is generally less important when it comes to treatment
  - Some sex differences in care were observed, but these were not pronounced
  - Age is the most consistent determinant of cancer treatment
  - Where you live also matters

# Driving Improvement and Equity

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- Reduce Cancer-Related Health Inequities by Focusing on Prevention and Screening
- Screening Programs are Not Enough: A System for Ensuring Follow-up of Abnormal Screening Tests is Necessary
- Address the Unique Needs of an Aging Population in Cancer Care Delivery
- Focus on Prevention and End of Life Issues for Lung Cancer as Prognosis is Poor and Much Lung Cancer is Preventable
- Improve Quality, Availability and Timeliness of Data to Assess Cancer and Cancer Care in the Province
- Routinely Include Gender and Equity Analysis in Health Indicator Monitoring

# Targets for Intervention

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- Interventions:
  - Patient Level
  - Practice Level
  - Health System Level
  - Community Level
- Partnerships with Human Service Providers and Community based Organizations
- Quality Improvement-Target and Monitor Disparities
- Advocacy for Policy and Cross-Sectoral Partnerships to Address Social Determinants of Health

# For more information, please contact us:

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## The POWER Study

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Improving Women's  
Health in Ontario

Pour l'amélioration de la  
santé des Ontariennes

**ST. MICHAEL'S HOSPITAL**  
*A teaching hospital affiliated with the University of Toronto*

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