

# The Medical Journal of Australia • MJA

# MEDIA RELEASE

## **CANCER OVERDIAGNOSIS ACCOUNTS FOR 18-24% OF CASES**

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ABOUT 11 000 cancers in women and 18 000 in men may be overdiagnosed in Australia each year, according to the authors of research published online today by the *Medical Journal of Australia*.

Overdiagnosis is defined as the diagnosis of cancer in people who would never have experienced symptoms or harm had the cancer remained undetected and untreated. Overdiagnosis of certain screen-detected cancers is common, including 20–50% of prostate cancer and 11–19% of breast cancer diagnoses.

Using routinely collected Australian Institute of Health and Welfare national data, Professor Paul Glasziou, from the Institute for Evidence-Based Healthcare at Bond University, and colleagues, estimated recent (2012) and historical (1982) lifetime risks (adjusted for competing risk of death and changes in risk factors) of diagnoses with five cancers: prostate, breast, renal, thyroid cancers, and melanoma.

They found that for women, absolute lifetime risk increased by 3.4 percentage points for breast cancer, 0.6 percentage point for renal cancer, 1.0 percentage point for thyroid cancer, and 5.1 percentage points for melanoma. An estimated 22% of breast cancers (invasive cancers, 13%), 58% of renal cancers, 73% of thyroid cancers, and 54% of melanomas (invasive melanoma, 15%) were overdiagnosed, or 18% of all cancer diagnoses (8% of invasive cancer diagnoses).

For men, absolute lifetime risk increased by 8.2 percentage points for prostate cancer, 0.8 percentage point for renal cancer, 0.4 percentage point for thyroid cancer, and 8.0 percentage points for melanoma (invasive melanoma, 1.5 percentage points). An estimated 42% of prostate cancers, 42% of renal cancers, 73% of thyroid cancers, and 58% of melanomas (invasive melanomas, 22%) were overdiagnosed, or 24% of all cancer diagnoses (16% of invasive cancer diagnoses).

“We estimated that overdiagnosis accounted for about 18% of cancer diagnoses in women in Australia during 2012, and about 24% of diagnoses in men. That is, about 11 000 cancers in women and 18 000 in men may be overdiagnosed each year,” Glasziou and colleagues wrote.

“The reason for overdiagnosis differs by cancer type.

“Overdiagnosis of breast cancers is largely attributable to the national screening program, that of prostate cancers and melanoma to opportunistic but extensive screening in Australia. Renal cancer overdiagnosis appears to be largely linked with cancers detected as incidental findings during abdominal imaging for an unrelated reason (incidentalomas). Overdiagnosis of thyroid cancer is related to both incidentalomas and to excessive investigation of thyroid function test abnormalities.

“Different approaches to reducing rates of overdiagnosis are therefore required for different cancer types.”

Reducing rates of overdiagnosis was vital, the authors wrote, while acknowledging that eliminating overdiagnosis altogether was “unlikely”.

“Rates of avoidable overdiagnosis need to be reduced to the lowest level compatible with targeted screening and appropriate investigation,” they wrote.

“We also need to examine strategies for reducing overtreatment of low risk prostate, breast and thyroid cancers.

“A second, and perhaps more important implication is that health services need to be alert to the new areas of overdiagnosis and detect them early. This could be an important role for the Australian Institute of Health and Welfare and state cancer registries; increased test, incidence, or treatment rates, without corresponding rises in mortality, could indicate emerging areas of overdiagnosis,” they concluded.

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