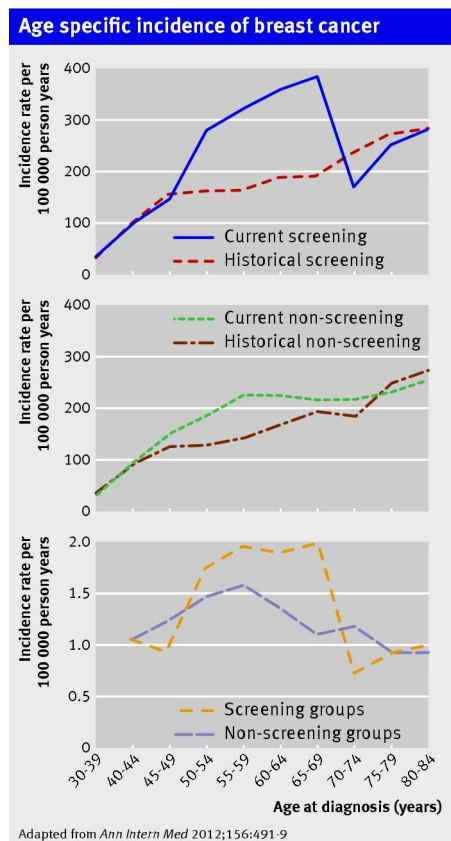


RESEARCH NEWS

All you need to read in the other general journals

Screening overdiagnoses 6-10 women for every death from breast cancer prevented

Ann Intern Med 2012;156:491-9



Researchers estimate that breast cancer would never have become apparent in 15-25% of women diagnosed through the Norwegian screening programme. For every 2500 women invited for screening, six to 10 women are overdiagnosed, 20 cases of breast cancer are detected and treated early, and one death from breast cancer is prevented.

Previous reports have estimated overdiagnosis in breast cancer screening programmes as between 0% and 54%. Rates of overdiagnosis are difficult to estimate because breast cancer trends irrespective of screening must be taken into account and lead time (the amount of time a diagnosis by mammography precedes a clinical diagnosis) must be adjusted for. The various methods used by researchers yield very different results, and there is no universally accepted method to estimate overdiagnosis.

The current researchers took advantage of a national screening programme that was gradually implemented by geographical region over nine years. Attendance was high. Only invasive breast cancer was taken into account and carcinoma in situ was excluded from the analysis. To account for temporal trends, the incidence of breast cancer with screening was compared with historical incidence in the same region before screening was implemented, as well as with concurrent incidence of breast cancer in counties not yet included in the screening programme. Two different methods were also used to adjust for lead time. Since 2005, all Norwegian women aged 50-69 years have been invited for mammography every two years.

No support for MRI in early detection of breast cancer

JAMA 2012;307:1394-404

The addition of ultrasound or magnetic resonance imaging (MRI) to mammography improves the detection of breast cancer but also increases false positive findings in women at increased risk.

More than 2700 women participated in a screening study in which both mammography and ultrasound were performed each year for a total of three years in a randomised order. All women had dense breast tissue on the first mammography screen and at least one other risk factor for breast cancer, most often a personal history of breast cancer. After three years, eligible women were offered free MRI, and 58% of these women accepted.

The addition of ultrasound to mammography helped identify an average of 4.3 extra cancers per 1000 women per year. The further addition of MRI detected an extra 14.7 cancers per 1000 women. To detect one case of breast cancer, 127 mammographies, 234 supplemental ultrasounds, and 68 supplemental MRIs needed to be performed.

However, of the 5% of screened women who had a biopsy just because of a positive ultrasound result, only 7.4% had cancer confirmed by histology or future clinical outcomes. Similarly, of the 126 women thought to have cancer just because of a positive MRI result, cancer was confirmed in only nine women. The researchers advise against adding MRI to mammography for breast cancer screening, given the high false positive rates, high cost, and low uptake among women offered MRI.

Fluoroquinolones may precipitate detachment of the retina

JAMA 2012;307:1414-9

Four case reports have previously reported that fluoroquinolones might induce detachment of the retina. This has now been confirmed in a case-control study nested within a cohort of nearly one million patients who saw an ophthalmologist in British Columbia over a period of eight years.

Among 4384 patients with detachment of the retina, 145 were current users of fluoroquinolones, 12 took the drugs in the week before the diagnosis (recent users), and 288 took them during the previous year (former users). Each case was matched with 10 controls, for age and month of entry into the cohort. Analyses were adjusted for sex, history of cataract surgery, myopia, diabetes, number of visits to an ophthalmologist, and the number of prescription drugs taken in the previous year.

No excess risk of retinal detachment was seen for recent (0.3% of cases *v* 0.2% of controls; adjusted rate ratio 0.92, 95% CI 0.45 to 1.87) or past (6.6% *v* 6.1%; 1.03, 0.89 to 1.19) use of fluoroquinolones. However, the risk was increased 4.5-fold in current users (3.3% *v* 0.6%; 4.50, 3.56 to 5.70), with a number needed to harm of 2500. In the US, an estimated 1440 cases may be attributable to the use of fluoroquinolones each year.

It may be that fluoroquinolones damage collagen, which plays a major role in the integrity of the vitreous body. The damage may result in posterior vitreous detachment, thus increasing the risk of retinal detachment. In this study, ciprofloxacin was the most commonly prescribed fluoroquinolone (eight out of 10 patients). No increased risk of retinal detachment was seen among current users of β lactam antibiotics (0.74, 0.35 to 1.57) or short acting β agonists (0.95, 0.68 to 1.33).

Cancer diagnosis linked to increased suicides and cardiovascular death

N Engl J Med 2012;366:1310-8

A registry based cohort study that spanned 16 years and included more than six million Swedes aged 30 years or more has found that, in the week after a diagnosis of cancer, the risk of suicide or death from a cardiovascular cause is more than 12 and 5.6 times higher, respectively.

A total of 13 284 suicides were recorded (0.18/1000 person years), 786 of which were in people diagnosed with cancer (0.36/1000 person years), 29 within the first week after diagnosis (2.5/1000 person years; relative risk 12.6, 95% CI 8.6 to 17.8). The highest relative risk was seen for oesophageal, liver, or pancreatic cancer, followed by lung cancer (16-fold and 12-fold in the first week after the diagnosis, respectively).

A total of 543 144 people without a cancer diagnosis died of cardiovascular causes (7.53/1000 person years) compared with 48 991 people diagnosed with cancer (23.1/1000 person years). In the first week after a cancer diagnosis, 1318 people died of cardiovascular causes (116.8/1000 person years; relative risk 5.6, 95% CI 5.2 to 5.9). The excess risk was highest for tumours of the central nervous system, followed by the oesophagus, liver, or pancreas, and then lung cancer (30-fold, 15-fold, and 12-fold, respectively).

As time passed since the diagnosis of cancer, the excess risk of suicides and death from a cardiovascular cause dropped but remained higher throughout the study.

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