

Obstetrics and gynaecology

Atypical glandular cells on screening raise cervical cancer risk

Atypical glandular cell change detected by cytological screening is associated with a high and persistent risk of cervical cancer, particularly adenocarcinoma, a Swedish longitudinal study has shown.

Using comprehensive national registers the authors identified more than 3 million women aged between 23 and 59 years who had had an eligible cervical cytological test between 1 January 1980 and 1 July 2011.

In the 3,024,340 women tested, there were 324,426 abnormal results (10.73%). The majority of these, 244,168, showed low-grade squamous intraepithelial neoplasia (LSIL); 65,633 had high-grade changes (HSIL), and the remaining 14,625 had atypical glandular cells (AGC).

The women who had AGC were significantly older than those with squamous abnormalities with a median age at presentation of 45 years compared with 33 for those with LSIL and HSIL ($P < 0.001$ for both).

- Of the women with AGC: 330 (2.26%) went on to develop cervical cancer, of which 243 (73.6%) were adenocarcinoma 74 (22.4%) squamous cell carcinoma

- In women with HSIL: 2,004 (3.1%) developed cancer (10.9% adenocarcinoma, 85.7% squamous cell carcinoma)

- In those with LSIL: 1,328 (0.54%) developed cancer (14.5% adenocarcinoma, 82.2% squamous cell carcinoma)

- For women with normal cytology: 0.010% developed cervical cancer

The proportion of women with AGC who had a prevalent cancer, i.e. detected within six months of the abnormal cytology test, was 1.4%. This was significantly lower than among women with HSIL (2.5%, $P < 0.001$) but significantly higher than the LSIL women (0.2%, $P < 0.001$). The rate of incident cervical cancer was higher in women with AGC than HSIL, see table 1, below. This endured for the first ten years after the index abnormal cytology result.

Not until 10.5-15.5 years after the abnormal cytology result did the incident cancer figures for HSIL exceed those for AGC, see table 1 below.

Women with AGC presenting between 30 and 39 years of age had the highest incident cancer rate.

Only 54% of women with AGC had histology assessment within 6 months compared with 86% of those with HSIL.

Women with AGC changes, who tended to be older than those with

HSIL and LSIL changes, were at high risk of developing invasive cancer, particularly those aged 30-39 years. Most, but by no means all, of these cancers were adenocarcinomas.

In part, these findings may reflect difficulties in identifying adenocarcinoma and in the past less diligence in following up on AGC cytology reports.

However, it is clear that any woman with AGC should be considered at high risk of developing invasive cancer and that her risk endures for at least 15 years, perhaps more.

The study authors state: 'Women with AGC found at screening should be properly assessed with histology immediately and must not be lost to follow-up.'

'A more aggressive assessment strategy seems to be warranted, for example by including an additional histology assessment in one year and close surveillance for many years,' they add.

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Wang J, Andrea B, Sundström K et al. Risk of invasive cervical cancer after atypical glandular cells in cervical screening: nationwide cohort study. *BMJ* 2016;352:i276

Table 1

Event counts, incidence rates (IR), and incidence rate ratios (IRR) for incident cervical cancer by abnormality

	0.5-3.5 years follow-up			10.5-15.5 years follow-up		
All histopathologies	Cases*	IR†	IRR (95% CI)‡	Cases*	IR†	IRR (95% CI)‡
AGC	73	190.8	24.1 (19.1 to 30.5)	12	37.9	4.8 (2.7 to 8.5)
HSIL	178	103.9	13.4 (11.5 to 15.6)	63	43.6	5.5 (4.3 to 7.1)
LSIL	347	52.9	6.8 (6.1 to 7.6)	168	33.4	4.2 (3.6 to 5.0)
Normal	—	—	Reference	—	—	Reference

* No of cases of cervical cancer

† Observed incidence rate, per 100,000 person-years

‡ Incidence rate ratio relative to women with regular normal cytology, adjusted for attained age

AGC = Atypical glandular cells HSIL = High-grade squamous intraepithelial neoplasia LSIL = Low-grade squamous intraepithelial neoplasia