Who should have colposcopy?

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EVIDENCE-BASED ANSWER

Colposcopy is the preferred test in the work-up of patients with abnormal cervical cytology:

- Low-grade squamous intraepithelial lesion (LSIL): mild dysplasia
- High-grade squamous intraepithelial lesion (HSIL): moderate to severe dysplasia.
- Atypical squamous cells of undetermined significance (ASC-US) with high-risk human papillomavirus (HPV) DNA
- Atypical squamous cells, cannot rule out HSIL (ASC-H)
- Atypical glandular cells (AGC)
- Adenocarcinoma in situ (AIS)

Colposcopy is also recommended for patients with symptoms suggestive of cervical cancer (abnormal appearance of the cervix, persistent and undiagnosed vaginal discharge or bleeding) regardless of cytology results, and in the follow-up of patients previously treated for cervical dysplasia (Grade of Recommendation: B). Colposcopy is not recommended for routine cervical cancer screening.

EVIDENCE SUMMARY

The primary role of colposcopy is to identify cervical lesions, allowing directed biopsies to identify invasive cancer or its precursors. Although colposcopy has been studied as a primary screening technique, issues of cost, accessibility, invasiveness, and low specificity severely limit its usefulness in this role.¹ Using histology as the gold standard, the sensitivity of colposcopy for cervical abnormalities is high (96%; 95% confidence interval [CI], 95%–97%), but the specificity is much lower (48%; 95% CI, 47%–49%).² This low specificity means that more than half of women with no cervical pathology will have an abnormal colposcopy result. The corresponding positive and negative likelihood ratios are 2 and 0.1, respectively. Consequently, a normal
colposcopy result can effectively rule out cervical pathology, thus supporting its role as a diagnostic rather than a screening tool.

While most lesions are found by abnormal cytology, the sensitivity of the Papanicolaou smear ranges from 30% to 89%.

Therefore, colposcopy is also indicated for patients with symptoms suggestive of cervical dysplasia or cancer (abnormal appearance of the cervix, or persistent and undiagnosed vaginal discharge or bleeding), even in the setting of normal cytology.

Colposcopy is also indicated for follow-up after treatment of cervical dysplasia. One study identified 3 risk factors for recurrence of dysplasia after a loop electrocautery excision procedure (LEEP): residual disease at either the endocervical or ectocervical margins, and involvement of endocervical glands. The presence of these risk factors predicted a recurrence rate of almost 70%. Because 8% of the recurrences were missed on cytology, the authors recommended colposcopy 6 months after LEEP for patients with these risk factors.

**RECOMMENDATIONS FROM OTHERS**

The place of colposcopy in the work-up of patients with abnormal cytology is well supported. With the recent revision of the Bethesda System by the National Cancer Institute, the American Society for Colposcopy and Cervical Pathology (ASCCP) held a consensus conference to review the literature and provide evidence-based guidelines for management of abnormal cervical cytology. Its recommendations on colposcopy are summarized in the Table.

The U.S. Preventive Services Task Force's 1996 recommendations found insufficient evidence to recommend either for or against the use of colposcopy as a screening tool for cervical cancer. Based on high cost and low specificity, it recommends against screening colposcopy.

### Table: Recommendations for colposcopy, American Society for Colposcopy and Cervical Pathology

<table>
<thead>
<tr>
<th>Cytology result</th>
<th>Recommendation for colposcopy</th>
<th>Strength of recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC-US</td>
<td>Preferred for positive high-risk HPV DNA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Acceptable for any patient with ASC-US</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Also acceptable: intensive cytology follow-up alone</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Preferred for any immunosuppressed patient</td>
<td>B</td>
</tr>
<tr>
<td>ASC-H</td>
<td>Preferred for all patients</td>
<td>A</td>
</tr>
<tr>
<td>AGC or AIS</td>
<td>Preferred for all patients (include endocervical curettage)</td>
<td>A</td>
</tr>
</tbody>
</table>
Preferred for those older than 35 years, or having atypical endometrial cells, or unexplained vaginal bleeding (include endometrial biopsy)

<table>
<thead>
<tr>
<th>LSIL</th>
<th>Preferred for all patients</th>
<th>A</th>
</tr>
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<tbody>
<tr>
<td>HSIL</td>
<td>Preferred for all patients (include endocervical curettage)</td>
<td>A</td>
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</table>

**CLINICAL COMMENTARY**

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The evaluation of abnormal Pap smear results is a common problem for providers of women’s health care. Questions as to which women should be referred for colposcopy occur most commonly when the Pap smear shows ASC-US, AGC, or abnormal clinical findings. The recent evidence-based guidelines from the ASCCP provide clearer guidance as to who needs colposcopy, especially when Pap smear results are minimally abnormal.

Evaluation of LSIL confirmed by colposcopy and biopsy is another area causing confusion. It is reasonable for these patients to be followed with regular Pap smears for up to 2 years, as the smears of many women will return to normal without any treatment. I usually do not recommend they return for colposcopy unless the Pap smear result worsens or does not normalize after 2 years.

Patients, as well as providers, have many questions regarding HPV testing. Recently, the ALTS trial has shown that HPV testing in patients with ASC-US can be useful in determining which patients need colposcopy.9

**REFERENCES**


