Colposcopy Management Algorithms for Patients Positive for High Risk HPV

Updated: January 2024
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Standard Colposcopic Definitions

**Colposcopic Impression:** The colposcopist’s opinion as to the nature of any lesion seen, based on the classic colposcopic features of surface contour, colour tone, borders, intercapillary distance, vascular patterns, etc. Colposcopic impression is the specific diagnosis that the colposcopist would expect to be returned on any accompanying biopsy material based on their visual interpretation.

**Colposcopic Biopsy/Pathology:** The histopathological diagnosis of any directed biopsy that was obtained at the time of the colposcopic examination. If more than one biopsy is obtained, the most advanced lesion is recorded.

**Colposcopic Evaluation:** The clinical working diagnosis based on combining the information from both the colposcopic impression and the biopsy/pathology diagnosis. This diagnosis can never be less than the colposcopic biopsy, but may be greater than the colposcopic biopsy if the colposcopist believes the biopsy is not reflecting the most advanced pathology suspected based on their assessment. The presenting cytology is NOT part of the colposcopic evaluation.

**PRACTICE POINTS:**
- **Type 1 or 2 TZ** with lesion identified – endocervical sampling “acceptable”.
- **Type 1 or 2 TZ** colposcopy with **no lesion** identified – endocervical sampling “preferred”.
- **Type 3 TZ** colposcopy – endocervical sampling “required” to rule out high grade disease

<table>
<thead>
<tr>
<th>Cytology</th>
<th>Pos HR-HPV (Any)</th>
<th>Pos HPV 16</th>
<th>Pos HPV 18</th>
<th>Pos HPV Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Normal</td>
<td>3.4%</td>
<td>5.3%</td>
<td>3%</td>
</tr>
<tr>
<td>ASCUS</td>
<td>4.4%</td>
<td>9% – 12.9%</td>
<td>5%</td>
<td>2.7% – 4.4%</td>
</tr>
<tr>
<td>LSIL</td>
<td>4.3%</td>
<td>11%</td>
<td>3%</td>
<td>4.3%</td>
</tr>
<tr>
<td>ASC-H</td>
<td>26%</td>
<td>28%</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>HSIL</td>
<td>49%</td>
<td>60%</td>
<td>30%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Table 1: Immediate-risk CIN 2+ based on primary HPV-based screening and reflex cytology results

Guidelines for the Assessment of Individuals with Positive High Risk HPV

Ia: HPV Positive: Cytology Normal ASCUS, LSIL

Table 1: Immediate-risk CIN 2+ based on primary HPV-based screening and reflex cytology results

<table>
<thead>
<tr>
<th>Cytology</th>
<th>HPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pos HR-HPV (Any)</td>
</tr>
<tr>
<td>Normal</td>
<td>3.4%</td>
</tr>
<tr>
<td>ASCUS</td>
<td>4.4%</td>
</tr>
<tr>
<td>LSIL</td>
<td>4.3%</td>
</tr>
</tbody>
</table>
Ib: HPV Positive: Cytology ASC-H or HSIL-Mod/Severe

HPV Positive: ASC-H or HSIL Mod/Severe
First Colpo Visit: ± Cervical Biopsy ± Endocervical Curettage

- Histology Normal or CIN 1
- Rule out VAIN ± cytopathology review to rule out CIN 2+ histology
- No CIN 2+ histology confirmed
- T1/2 TZ
  - Option for all (recommended for HSIL Severe Cytology)
  - Second colposcopy visit + HPV @ 6 months
  - Third colposcopy visit + HPV @ 12 months
- HPV-, Histology ≤CIN1
  - Persistent HPV+, Histology ≤CIN1
  - CIN2+ at any visit
  - Colpo at 12-month intervals until HPV-, Histology ≤CIN1
  - Discharge from colposcopy; HPV test in 12 months
- Histology CIN 2+
  - T3 TZ
  - Excisional procedure

1 Laser ablation may also be used to treat histologic CIN 2+ when specific criteria are met. See Guideline IIa.

Table 1: Immediate-risk CIN 2+ based on primary HPV-based screening and reflex cytology results

<table>
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<tr>
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<th>HPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pos HR-HPV (Any)</td>
<td>Pos HPV 16</td>
<td>Pos HPV 18</td>
<td>Pos HPV Other</td>
</tr>
<tr>
<td>ASC-H</td>
<td>26%</td>
<td>28%</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>HSIL</td>
<td>49%</td>
<td>60%</td>
<td>30%</td>
<td>49%</td>
</tr>
</tbody>
</table>
Ic: HPV Positive: Cytology Atypical Glandular Cells: AGC and AIS

**Table 1: Immediate-risk CIN 2+ based on primary HPV-based screening and reflex cytology results**

<table>
<thead>
<tr>
<th>Cytology</th>
<th>Immediate Risk AIS</th>
<th>Immediate Risk Malignancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGC-NOS</td>
<td>2.9%</td>
<td>5.2%</td>
</tr>
<tr>
<td>AGC-FN</td>
<td>13%</td>
<td>21%</td>
</tr>
</tbody>
</table>

*HPV Status not defined
Id: Pregnant Individuals

**HPV Positive in Pregnancy**

- **Cytology Nlm/LSIL/ASCUS**
  - Impression negative or CIN 1
  - Repeat Colposcopy 2-3 months postpartum (Bx & ECC); (If impression CIN 2, 3 then as per cytology HSIL)

- **Cytology ASCH/HSIL Mod/Severe**
  - Impression negative or CIN 1, 2, 3
  - Colposcopy Q3-4 months; last Colposcopy at <32-34 weeks; then 2-3 months postpartum (Bx & ECC)

- **Suspicious for invasion, refer to VGH Colposcopy**
  - Impression suspicious for malignancy – biopsy required
  - Bx: Non-diagnostic or non-malignant -> Repeat Colposcopy <2 weeks or refer to VGH
  - Bx: Malignant -> Refer to BC Cancer

- **Atypical Glandular Cells - NOS**
  - Impression negative or CIN 1, 2, 3
  - Colposcopy Q3-4 months; last Colposcopy at <32-34 weeks; then 2-3 months postpartum (Bx & ECC)

- **Atypical Glandular Cells – Favor Neoplasia**
  - Refer to VGH for Colposcopy

**PRACTICE POINTS:**

- Endocervical sampling is contraindicated during pregnancy.
- Cervical biopsy is safe in pregnancy and is required for diagnosis if suspicious for microinvasion/invasion.
- No treatment in pregnancy unless invasion is suspected.
Guidelines for the Management of Abnormal Colposcopic Evaluations

IIa: Management of CIN 2, 3

Evaluation CIN 2, 3

For patients <25yo, see guideline IIb

Type 1 or 2 TZ colposcopy and the entire lesion is visualized – Excision or Ablation Treatment

Type 3 TZ colposcopy or the entire lesion is not visualized – Diagnostic Excisional Treatment

PRACTICE POINTS:

- Cryotherapy is NOT an acceptable treatment for CIN 2, 3.
- Acceptable treatment approaches for CIN 2, 3 are limited to ablative treatment with laser and or excisional treatment with cold knife cone and or LEEP. LEEP is preferred.
- Recommended depth of specimen 8-10mm.
Iib: <25 Years Old Evaluation CIN 2, 3

Colposcopy Q6 months for up to 2 years or until 25yo
Biopsy +/- ECC with annual HPV

For patients >25yo, see guideline IIa

Given low regression rates with CIN 3 (~20%), patients should have a discussion/consult regarding options of observation versus treatment

Regresses: CIN1 or negative
Discharge from colposcopy; HPV test in 12 months

Persistent > 24 months or patients attains 25 years, whichever comes first
Excisional and/or ablative treatment

PRACTICE POINTS:

- Given a compliant patient and a reliable follow up system, it is reasonable to follow young patients for up to 24 months or up to the age of 25 years (whichever comes first). After an informed discussion, and in appropriately selected patients, those with CIN 2 may choose to be followed conservatively up to age 30.
- Treatment recommendations are solely the responsibility of the treating physician. Follow up colposcopy exams should include biopsy +/- ECC.
- If compliance is a concern, then treatment is recommended.
IIc: Management of Adenocarcinoma in Situ

PRACTICE POINTS:

- Diagnostic excisional procedure is NECESSARY to confirm AIS and rule out invasive adenocarcinoma BEFORE proceeding to a hysterectomy. See Guideline IIIb.
- Ablative methods are NOT acceptable treatment for AIS
- Depth of LEEP should be > 10mm. Consider Post-LEEP ECC.
IId: Management of Microinvasive Cervical Cancer

Stage 1a1 squamous cell carcinoma, adenocarcinoma, or adenosquamous carcinoma on LEEP

Send to BC Cancer for expert pathology review

- DOI >3mm and/or LVSI
  - Referral to Gynecologic Oncology for management

- Positive margins for dysplasia or carcinoma, no LVSI
  - Repeat LEEP to clear margin and further evaluate DOI

- Negative margins for dysplasia or carcinoma, no LVSI
  - Fertility Sparing: surveillance
  - Non Fertility Sparing: simple hysterectomy

Confirmed DOI≤3mm, fertility sparing: surveillance

Confirmed DOI≤3mm, non fertility sparing: simple hysterectomy

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**Microinvasive Cervical Cancer (1a1) Invasive cervix carcinoma:** measured depth of invasion ≤3 mm in depth. Management of patients with stage 1a1 disease should be individualized depending on the age, the desire for fertility preservation, and the presence or absence of LVSI.

Colposcopists are encouraged to call Gynecologic Oncology, or refer for a consult, if there are any concerns or questions regarding the management plan.

**Surveillance Recommendations:**
- **After Simple Hysterectomy:** Follow up colposcopy of the vagina every 6 months for 5 years. History and physical at each visit and a cotest (HPV and cytology testing) on a sample from the vaginal vault at 12 months post hysterectomy. If HPV is negative and cytology is NILM, ASCUS or LSIL, vaginal vault cotesting can be discontinued but vaginal vault colposcopic examination should continue every 6 months for 5 years.
- **Fertility Sparing:** Follow up colposcopy every 6 months for 5 years. History, Physical, ECC at each visit. Cotest (HPV and cytology testing) at 12 months. If HPV is negative and cytology is NILM, ASCUS or LSIL they can transition back to routine HPV-based screening at 3 year intervals (average risk) or 1 year interval (immunocompromised).

**Please note:** Once a patient has a cervical cancer diagnosis, they will no longer be recalled as part of BC’s Cervix Screening Program. Please ensure that your patient receives the appropriate follow up. Ensure your recommendations for discontinuing HPV tests or your interval recommendation for ongoing testing is clear for the primary care provider prior to discharge from colposcopy.
Guidelines for Follow-Up of Previously Treated Cervical Disease

IIia: Post-Treatment CIN 2, 3

>25 years old
Evaluation CIN 2, 3

At 6 months:
Colposcopy, ECC, cotest (HPV and cytology testing)*

F/U time sooner if suspicious for invasion or recurrent/complicated disease (e.g., positive margin)

Evaluation negative, HPV negative – Discharge from colposcopy; Cotest (HPV and cytology testing) in 12 months with primary care provider

Evaluation negative, HPV positive – Repeat colposcopy, ECC, cotest (HPV and cytology testing) in 6 months

Evaluation CIN 2+ – Manage per guideline

At 12 months HPV negative, biopsy CIN1** – Discharge from colposcopy; Cotest (HPV and cytology testing) in 12 months with primary care provider

At 12 months HPV positive, biopsy negative for CIN2+ – Repeat colposcopy, ECC, cotest (HPV and cytology testing) every 12 months until negative

*Starting in June 2018, HPV testing will be done with Roche Cobas4800 HPV test. This test provides specific results regarding typing for HPV 16, HPV 18 and HPV other (non-16/18).

**With a negative HPV test, the risk of CIN2+ is <2%, which is average risk, so the patient may go back to screening with their next cotest (HPV and cytology testing) in 12 months. Therefore, women with biopsy results that are negative or CIN 1 may be discharged if HPV negative.
IIIb: Post-Treatment Adenocarcinoma in Situ

**Evaluation AIS**

- **LEEP/CONE margins negative for AIS**
  - Does the patient wish to retain fertility, after consultation reviewing risks and benefits of hysterectomy vs. conservative management?
    - Yes: 1st post-LEEP follow-up @ 6 months: Colposcopy, ECC, cotesting and Bx (as indicated)
    - No: Simple Hysterectomy
  - LEEP margin negative for AIS: Continue annual colposcopy, ECC and cotesting follow-up until colposcopy, ECC, HPV and cytology negative

- **LEEP/CONE margins positive for AIS**
  - LEEP margin positive: Repeat LEEP to clear margin of AIS
  - LEEP margin indeterminate: Consider pathology review or repeat LEEP or F/U in 2-4 months

**PRACTICE POINTS:**
- Margin status enters into this guideline.
- Patients should be advised that a hysterectomy is an option, but for patients who wish to retain fertility, conservative management is reasonable. Patients must be counseled regarding the risks versus benefits of follow-up versus hysterectomy so they can make an informed decision.
- Each time histology is positive, the clock restarts for 3 years of follow-up (if fertility preservation is still desired when hysterectomy again discussed at the time of recurrence).
- Follow-up at 6 months is for uncomplicated cases. The colposcopist may wish to see the patient sooner, e.g., 2-4 months, if the circumstances warrant it.
Guidelines for Post-Discharge from Colposcopy

Post-Discharge from Colposcopy

- HPV positive, low-grade referral cytology; Colposcopy biopsy ≤ CIN 1
  - No treatment
  - HPV test at 12 months
    - HPV negative
      - HPV-based screening at 5-year interval
    - HPV positive
      - Re-refer to colposcopy for usual indications
- Treatment in colposcopy for CIN 2 and CIN 3
  - Cotest Negative in colposcopy, Histology ≤ CIN 1
    - Cotest positive
      - Cotest (HPV and cytology testing) at 3 year intervals
        - Cotest positive
          - Cotest (HPV and cytology testing) at 3 year intervals
        - Cotest negative
          - HPV test at 3 year intervals
- Excisional treatment for AIS
  - Cotest positive in 12 months with primary care provider
    - Cotest positive
      - Cotest (HPV and cytology testing) at 3 year intervals
    - Cotest negative
      - Cotest (HPV and cytology testing) at 3 year intervals
- Completed 3 years of surveillance: Refer to Guideline IIb
  - Cotest negative
    - Cotest (HPV and cytology testing) at 3 year intervals