Clinical Guidance: Recommended Best Practices for Delivery of Colposcopy Services in Ontario
Best Practice Pathway Summary

June 14, 2016

Glossary of Terms

- **Colposcopy** is the examination of the cervix, vagina and, in some instances, the vulva, with the colposcope after the application of a three to five percent acetic acid solution coupled with obtaining colposcopically-directed biopsies of all lesions suspected of representing neoplasia.
- **Colposcopic impression** documents the visual inspection of blood vessel configurations, surface contour, colour tone and lesion demarcation before and after the application of acetic acid and/or Lugol's iodine.
- A colposcopic impression is considered "satisfactory" or "adequate" if the entire squamocolumnar junction and the margin of any visible lesion can be visualized with the colposcope.
- A colposcopic impression is considered "normal" if there is no visible abnormality on the cervix.
- **Endocervical curettage (ECC)** uses a spoon-shaped instrument, or curette, to scrape the mucous membrane of the endocervical canal (the passageway between cervix and uterus) to obtain a small tissue sample.
- **Diagnostic excisional procedure (DEP)** is the process of obtaining a specimen from the transformation zone and endocervical canal for histological evaluation and includes laser conization, cold-knife conization, loop electrosurgical excision (LEEP), and loop electrosurgical conization. DEPs can act as both diagnostic and therapeutic tools.
- **Cytopathology** is a branch of pathology that studies and diagnoses diseases on the cellular level; cervical smear tests screen for abnormal cytology.
- **Histopathology** is the microscopic study of diseased tissue.

Abbreviations and Acronyms

AC: adenocarcinoma
AGC-N: atypical glandular cells, favor neoplastic
AGC-NOS: atypical glandular cells, not otherwise specified
AIS: adenocarcinoma in situ
ASC-H: atypical squamous cells, cannot exclude high-grade squamous intraepithelial lesion
ASCUS: atypical squamous cells of undetermined significance
CIN: cervical intraepithelial neoplasia
colpo: colposcopy
cyto: cytology
DEP: diagnostic excisional procedure (both a diagnostic and therapeutic tool)
ECC: endocervical curettage
histo: histology
HPV: human papillomavirus
HSIL: high-grade squamous intraepithelial lesion
LEEP/LLETZ: loop electrosurgical excision procedure/large loop excision of the transformation zone
LSIL: low-grade squamous intraepithelial lesion
TZ: transformation zone (area of the cervix where abnormal cells and dysplasia occur); the location of the transformation zone on the cervix varies from woman to woman

Legend

Symbol	Definition
+/-	optional
cyto > LSIL	HSIL and ASC-H
cyto ≤ LSIL	LSIL, ASCUS or normal
cyto < LSIL	ASCUS or normal
histo ≤ LSIL	LSIL or normal
	colposcopic assessment is negative
	colposcopic assessment is positive
	a procedure
	a procedure result or outcome
	consider pathology review

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Best Practice Pathway Summary

Overview

The *Clinical Guidance: Recommended Best Practices for Delivery of Colposcopy Services in Ontario* contains five clinical best practice pathways with HPV testing and three clinical best practice pathways without HPV testing for the management of screen-detected cervical abnormalities in colposcopy.

The five best practice pathways with HPV testing are as follows:

- Workup and treatment: SIL referral in women ≥ 25 (Page 1);
- Conservative SIL management of women ≥ 25 in whom child bearing is of concern (Page 2);
- Post-treatment SIL management regardless of age (Page 3);
- Management of younger women ages 21 to 24 (Page 4); and
- Workup, treatment and management of AGC/AIS referral regardless of age (Page 5)

The three best practice pathways without HPV testing are as follows:

- Pathway without HPV testing for workup and treatment: SIL referral in women ≥ 25 (Page 6);
- Pathway without HPV testing for conservative SIL management of women ≥ 25 in whom child bearing is of concern (Page 7*)*; and
- Pathway without HPV testing for post-treatment SIL management regardless of age (Page 8).

Clinical best practices include the following components: referral criteria, indications for treatment, preferred therapies, follow-up algorithms, exit criteria and advice for ongoing screening following discharge from the colposcopy system, and relevant clinical considerations and guiding principles for colposcopy.

Diagnosis, Therapy and Post-Treatment Follow Up Key Considerations, (All Pathways)

The referral cervical cytology report should be available to the colposcopist before colposcopic assessment.

Cervical cytology may be repeated at the initial colposcopy if indicated, as long as it has been three months since the last cytology test.

Cervical colposcopic findings must be documented[61], including at minimum:

- Satisfactory/adequate, vs. unsatisfactory/inadequate;
- Location of lesion(s); and
- Colposcopic impression.

Random biopsies may be used at the discretion of the colposcopist. If a biopsy is performed, the management decision must be informed by the histologic diagnosis.

For lactating women, colposcopists should consider deferring colposcopy until the hypo-estrogenic state has resolved.

All women undergoing ablative therapy must have an established histologic diagnosis.

Regardless of age, women whose future child bearing status is of concern should be counselled on the risks and merits of conservative management if chosen/appropriate.

To make an adequate histologic diagnosis, a DEP must be considered when:

- A lesion extends into the canal beyond vision of the colposcopist;
- The squamocolumnar junction is not completely visible; or
- There is discordance among cytology, histology and/or colposcopic impression.

If a directed biopsy is inadequate for histological interpretation, the biopsy should be repeated.

Prior to treatment, a woman's written consent is required.

Where possible, conservative management is preferred, especially in women who wish to retain fertility options.

Excisional procedures allow for further pathology evaluation and assessment of margins. If neither is required, ablation is acceptable.

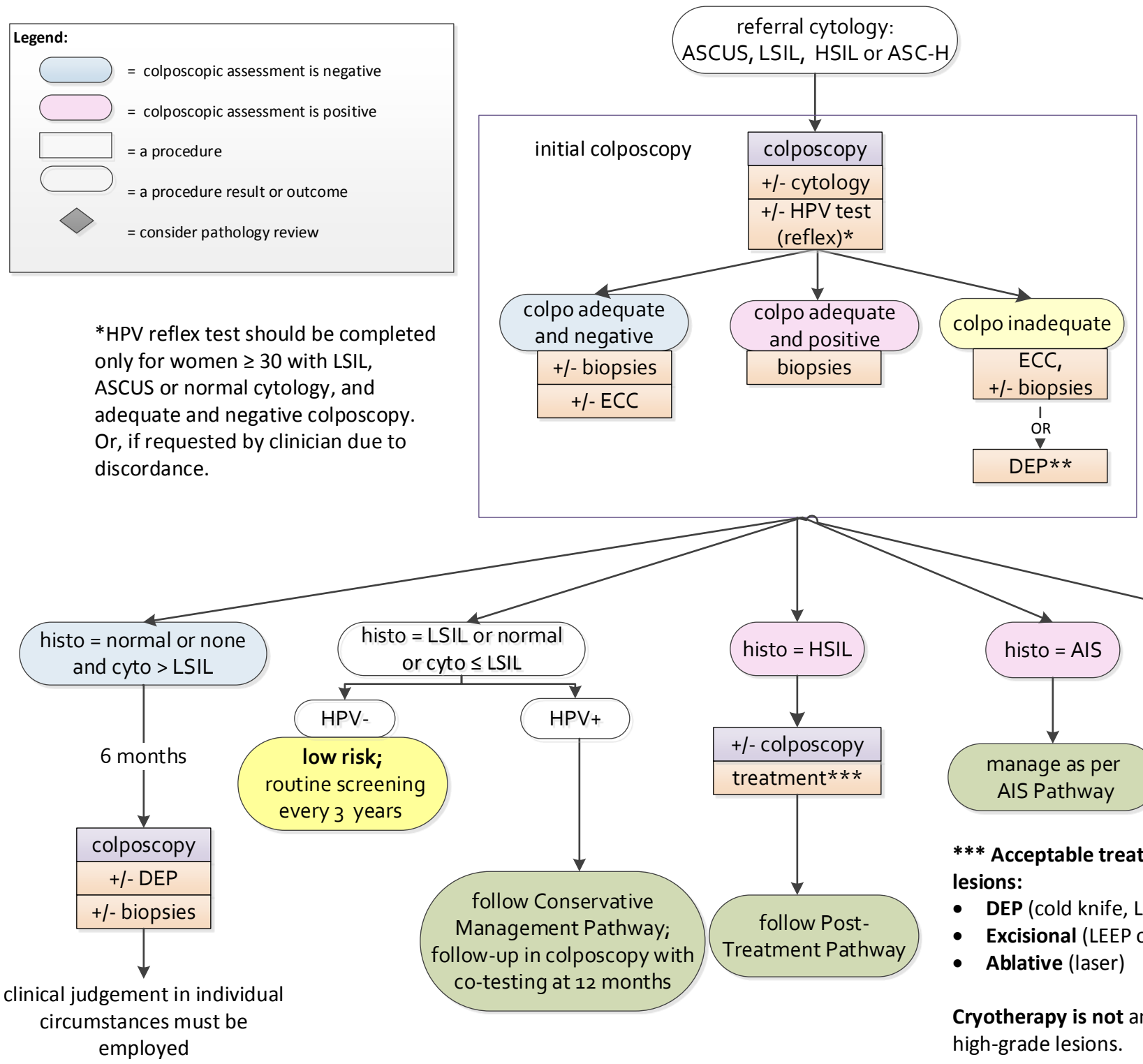
Pathology reviews:

- A pathology review is advised to resolve significant discordance (among cytology, histology and colposcopic impression) in cases where it affects management decisions. Pathology reviews should be documented in the patient chart and should report on the specific discordant elements.
- Because there is no formal recognition of a sub-speciality in gynecologic pathology, these pathology reviews should be conducted by a gynecologic pathologist practicing at a designated gynecologic oncology centre.

Clinical Management with HPV Testing in Colposcopy:
Workup and Treatment: SIL Referral in Women ≥ 25

Legend:
- = colposcopic assessment is negative
- = colposcopic assessment is positive
- = a procedure
- = a procedure result or outcome
- = consider pathology review

*HPV reflex test should be completed only for women ≥ 30 with LSIL, ASCUS or normal cytology, and adequate and negative colposcopy. Or, if requested by clinician due to discordance.



**Consider DEP for inadequate colposcopy in high-grade referrals only.

***** Acceptable treatment of high-grade lesions:**
- **DEP** (cold knife, LEEP or laser)
- **Excisional** (LEEP or laser)
- **Ablative** (laser)

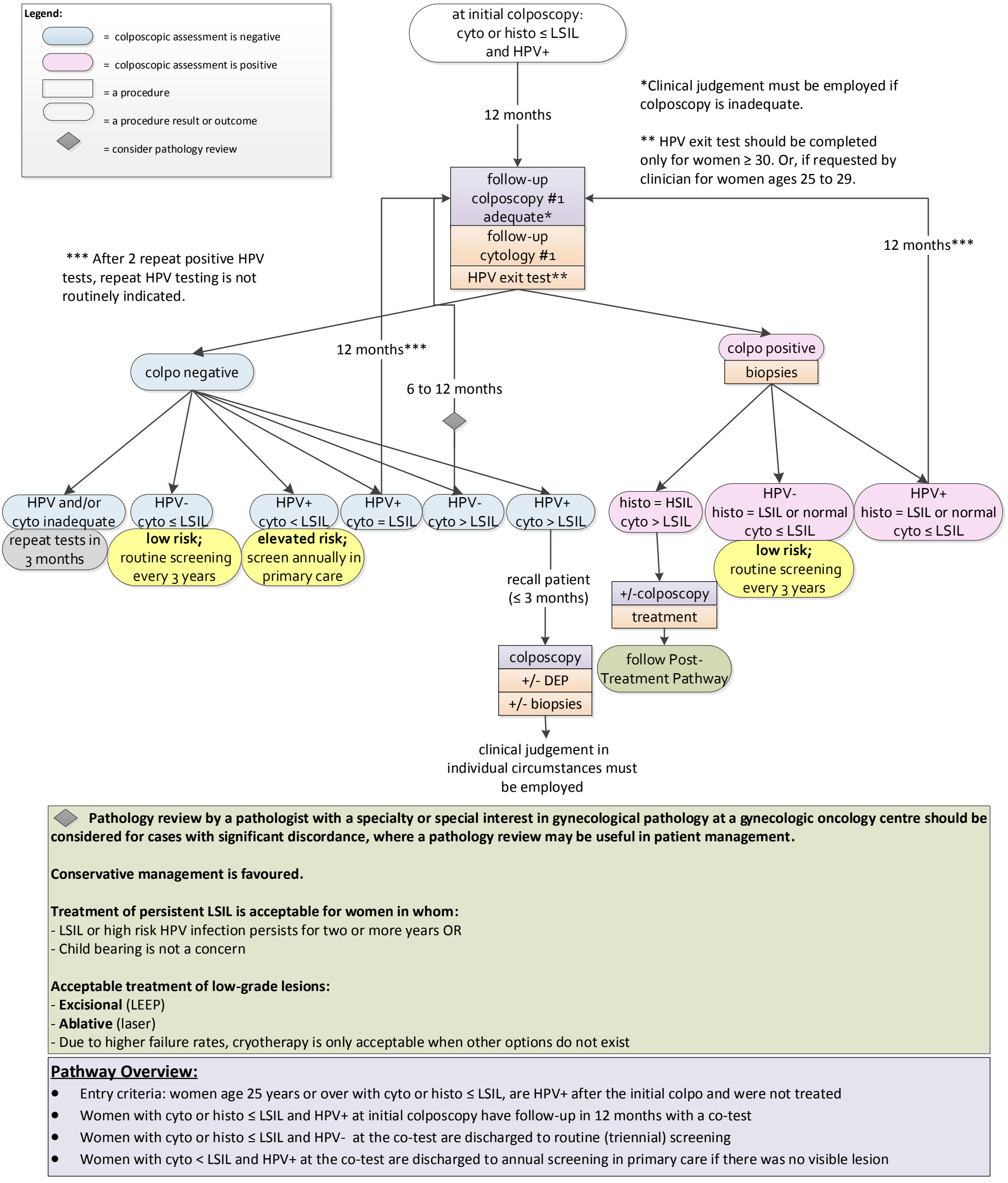
Cryotherapy is not an acceptable treatment for high-grade lesions.

Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

Pathway Overview:
- Entry criteria: women age 25 and over with an abnormal screening Pap result (ASCUS, LSIL, HSIL or ASC-H)
- HPV reflex testing only recommended at initial colposcopy for women age 30 and over with cyto ≤ LSIL, and adequate and negative colposcopy. If requested by a clinician due to discordance, a reflex HPV test should also be conducted. Due to high prevalence, HPV reflex test is generally not recommended in women ages 25 to 29 but may be used up to individual clinical judgement
- Women with HPV- (i.e., the majority of women) and histo = LSIL or normal, or cyto ≤ LSIL can be discharged to routine (triennial) screening

Clinical Management with HPV Testing in Colposcopy:

Conservative SIL Management for Women ≥ 25 in Whom Child Bearing is of Concern



Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

Conservative management is favoured.

Treatment of persistent LSIL is acceptable for women in whom:
- LSIL or high risk HPV infection persists for two or more years OR
- Child bearing is not a concern

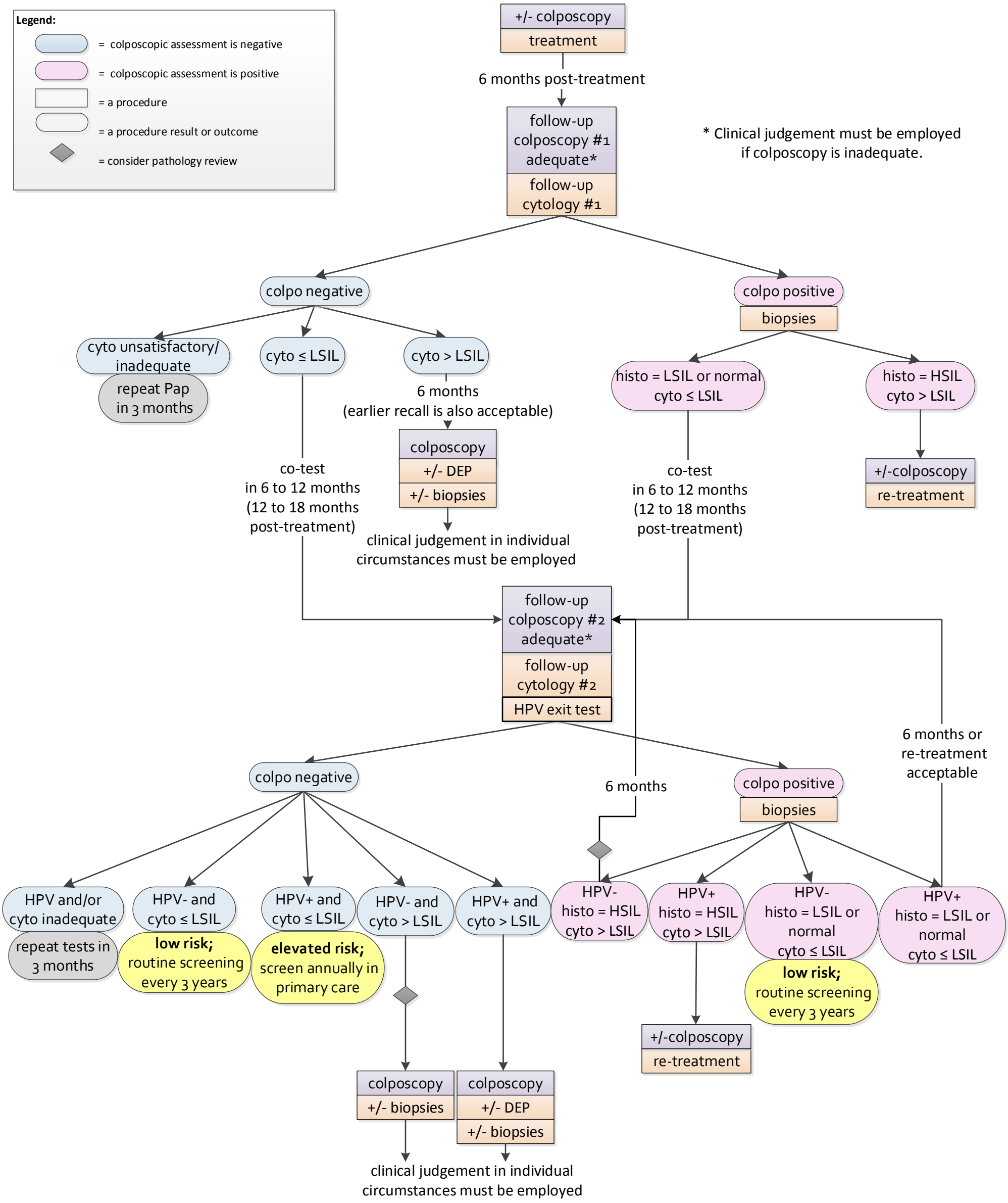
Acceptable treatment of low-grade lesions:
- **Excisional** (LEEP)
- **Ablative** (laser)
- Due to higher failure rates, cryotherapy is only acceptable when other options do not exist

Pathway Overview:

- Entry criteria: women age 25 years or over with cyto or histo ≤ LSIL, are HPV+ after the initial colpo and were not treated
- Women with cyto or histo ≤ LSIL and HPV+ at initial colposcopy have follow-up in 12 months with a co-test
- Women with cyto or histo ≤ LSIL and HPV- at the co-test are discharged to routine (triennial) screening
- Women with cyto < LSIL and HPV+ at the co-test are discharged to annual screening in primary care if there was no visible lesion

Clinical Management with HPV Testing in Colposcopy:

Post-Treatment SIL Management Regardless of Age



Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

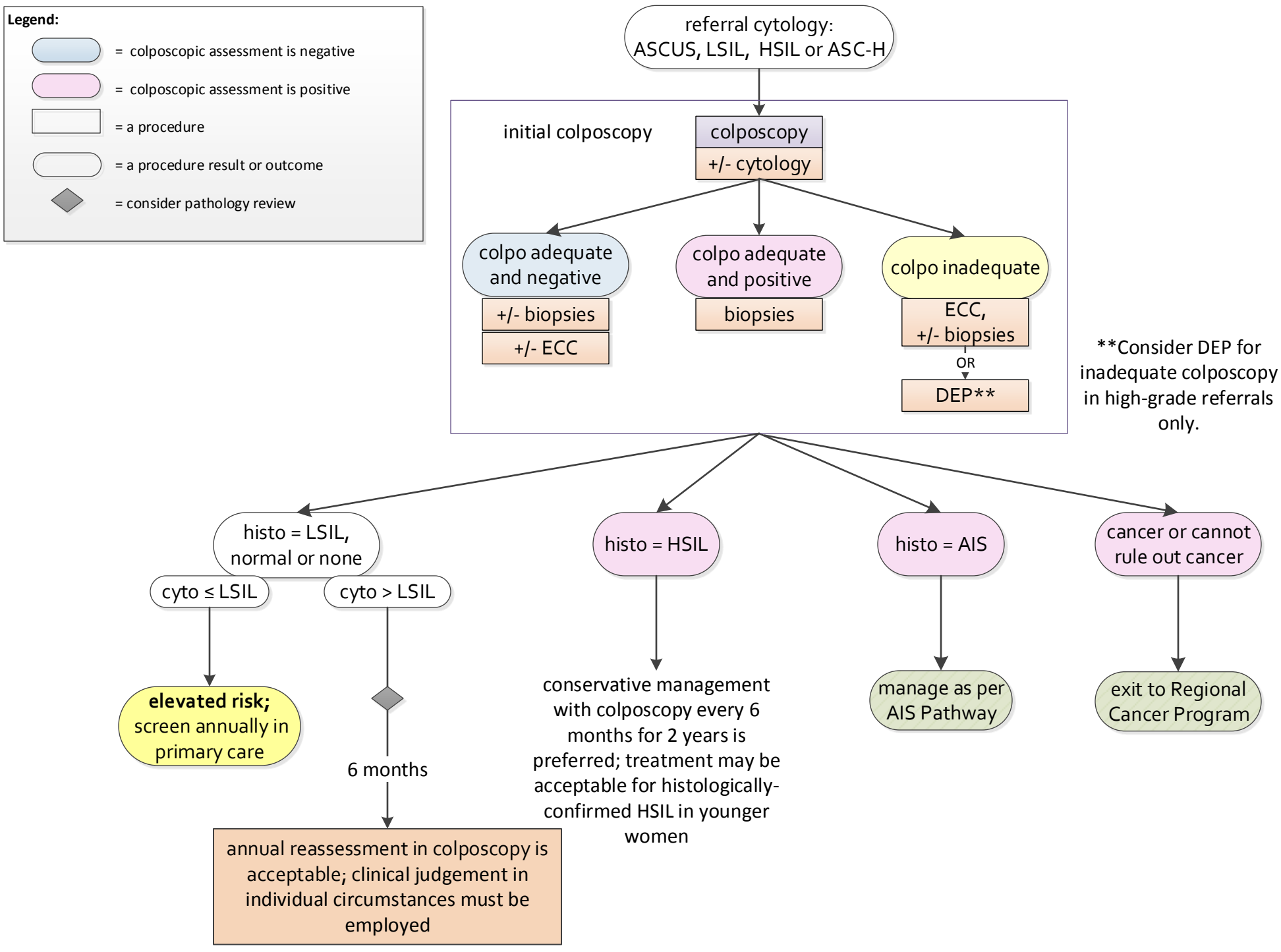
Pathway Overview:

- Entry criteria: women who have been treated for cervical dysplasia, regardless of age
- Women should have follow-up visit #1 at six months post-treatment, and women with cyto or histo ≤ LSIL return for one co-test at follow-up visit #2, 12 to 18 months post-treatment
- Women with cyto or histo ≤ LSIL who are HPV- at the co-test are discharged to routine (triennial) screening
- Women with cyto or histo ≤ LSIL who are HPV+ at the co-test are discharged to annual screening in primary care if there was no visible lesion; if a lesion was visible, it is acceptable for women to return in six months for another co-test or re-treatment

Clinical Management in Colposcopy:
Management of Younger Women Ages 21 to 24*

HPV testing is not to be used in this population

* Women under age 21 should not participate in cervical screening, as per the Ontario Cancer Screening Program guideline recommendations. If they have an abnormal screening result and have been referred for colposcopy, please follow this pathway.



Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

Pathway Overview:

- Entry criteria: women ages 21 to 24 with an abnormal screening Pap result (ASCUS, LSIL, HSIL or ASC-H)
- Younger women with histo = none, normal or LSIL and cyto > LSIL should be followed up in six months, and reassessed annually thereafter
- Younger women with cyto ≤ LSIL are discharged to annual screening in primary care

Clinical Management in Colposcopy:
Workup, Treatment and Management for AGC/AIS Referral Regardless of Age

Legend:
- = colposcopic assessment is negative
- = colposcopic assessment is positive
- = a procedure
- = a procedure result or outcome
- = consider pathology review

referral cytology: AGC-N, AGC-NOS or AIS

initial colposcopy
- colposcopy +/- cytology

colpo adequate and negative	colpo adequate and positive	colpo inadequate
ECC	+/- ECC	ECC
biopsies	biopsies	biopsies
+/-DEP*	DEP (in AIS)	OR DEP*

endometrial biopsy if > 35, or abnormal bleeding, or elevated risk for endometrial cancer

*Threshold for DEP is higher in AGC-N. Biospy alone may be acceptable for AGC-NOS.

- histo = LSIL or normal → follow Conservative Management Pathway
- histo = HSIL → +/- colposcopy, treatment** → follow Post-Treatment Pathway
- histo = AIS → colposcopy, treatment***, ECC
  - histo = LSIL or normal → follow Post-Treatment Pathway
  - histo = HSIL and/or AIS → positive margins?
    - YES → colposcopy at 6 months is acceptable; however, immediate re-excision can also be considered → clinical judgement in individual circumstances must be employed
    - NO → fertility desired?
      - NO → consider hysterectomy if cervix cannot be followed
      - YES
  - cancer or cannot rule out cancer → exit to Regional Cancer Program
- cancer or cannot rule out cancer → exit to Regional Cancer Program

**If appropriate, manage as per Younger Women Ages 21 to 24 Pathway.

***DEP (LEEP) is an acceptable form of treatment for AIS under appropriate circumstances. Cold knife cone remains an acceptable option for treatment. Providing the optimal specimen for pathology assessment is the highest priority.
DEP in this setting must provide an intact specimen with interpretable margins.

Post-Treatment for AIS
5-year follow-up period is recommended

6 months
- colposcopy
- cytology
- +/- ECC
- +/- HPV exit test****

****High risk HPV infection is a necessary condition for AIS. Its role as a predictor of outcome is unclear. Though data is insufficient to make a firm recommendation about HPV testing in the management of women with AIS, consider the use of HPV when appropriate.

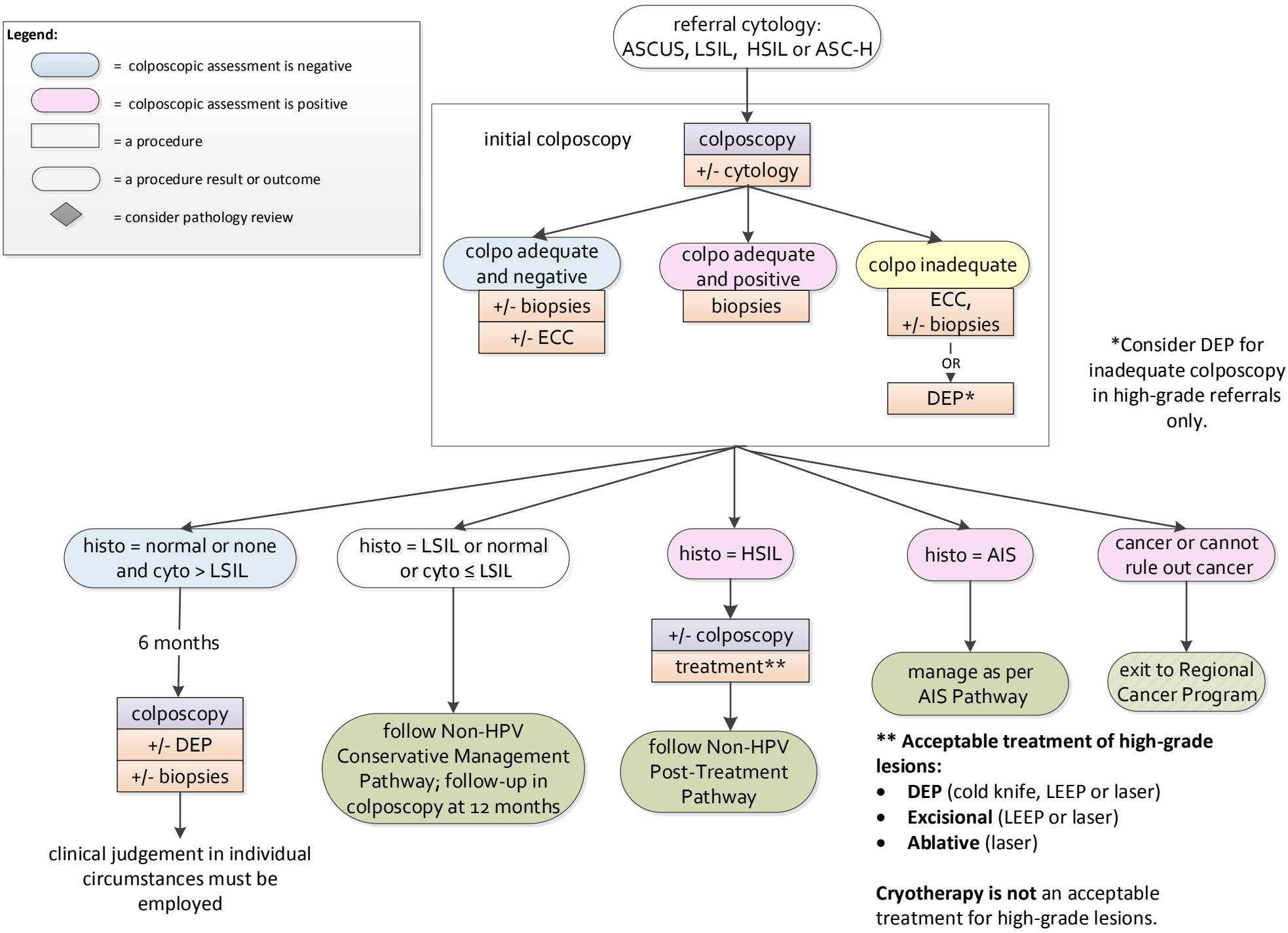
- all results negative → Follow-up in colposcopy every 6 months for 3 years; if all results remain negative after 3 years, follow-up annually for a further 2 years → **elevated risk;** screen annually in primary care; or long-term annual colposcopy is acceptable
- if any result positive → manage as per AGC/AIS Workup, Treatment and Management Pathway

Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

Pathway Overview:

- Entry criteria: women with screening Pap results of AGC-N, AGC-NOS or AIS, regardless of age
- After a total of five years of post-treatment follow-up in colposcopy with negative results, women treated for AIS can be discharged to annual screening in primary care or long-term annual colposcopy is acceptable

Clinical Management without HPV Testing in Colposcopy:
Workup and Treatment: SIL Referral in Women ≥ 25



**** Acceptable treatment of high-grade lesions:**

- **DEP** (cold knife, LEEP or laser)
- **Excisional** (LEEP or laser)
- **Ablative** (laser)

Cryotherapy is not an acceptable treatment for high-grade lesions.

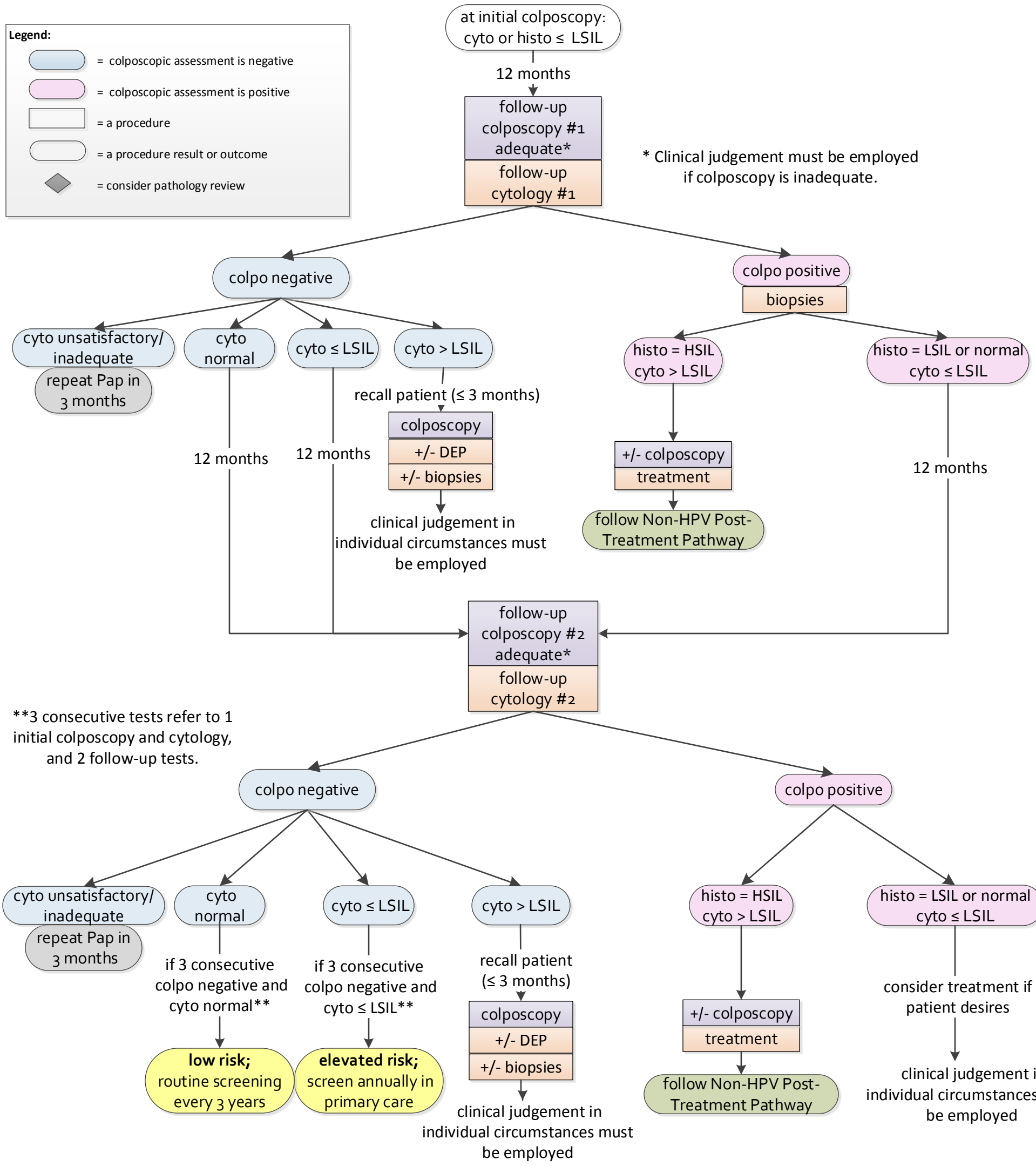
Pathology review by a pathologist with a specialty or special interest in gynecological pathology at a gynecologic oncology centre should be considered for cases with significant discordance, where a pathology review may be useful in patient management.

Pathway Overview:

- Entry criteria: women age 25 and over who have an abnormal screening Pap result (ASCUS, LSIL, HSIL or ASC-H)

Clinical Management without HPV Testing in Colposcopy:

Conservative SIL Management for Women ≥ 25 in Whom Child Bearing is of Concern



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Treatment of persistent LSIL is acceptable in women for whom:
- LSIL persists for two or more years OR
- Child bearing is not a concern

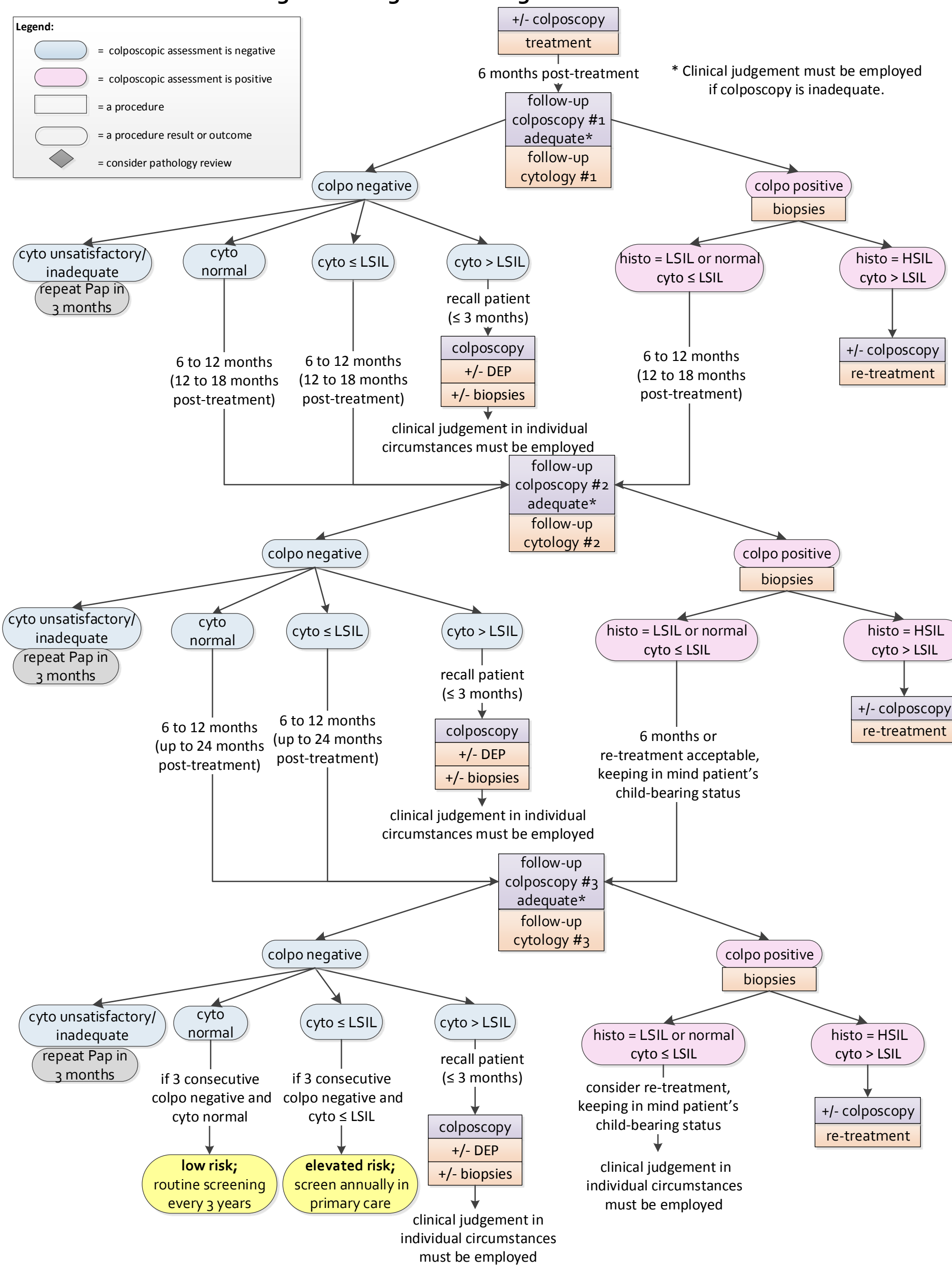
Acceptable treatment of low-grade lesions:
- **Excisional** (LEEP)
- **Ablative** (laser)
- Due to higher failure rates, cryotherapy is only acceptable when other options do not exist

Pathway Overview:

- Entry criteria: women who are age 25 or over with cyto or histo ≤ LSIL after the initial colposcopy and who were not treated
- Women with cyto or histo ≤ LSIL at initial colposcopy have follow-up visit #1 in 12 months and women with cyto or histo ≤ LSIL return for follow-up visit #2 in 24 months
- Women with three consecutive negative colposcopies and normal cytology are discharged to routine (triennial) screening
- Women with three consecutive negative colposcopies and cyto ≤ LSIL are discharged to annual screening in primary care

Clinical Management without HPV Testing in Colposcopy:

Post-Treatment SIL Management Regardless of Age



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Pathway Overview:

- Entry criteria: women who have been treated for cervical dysplasia, regardless of age
- Women should have follow-up visit #1 at six months post-treatment, and women with cyto or histo ≤ LSIL return for follow-up visit #2 at 12 to 18 months post-treatment and follow-up visit #3 up to 24 months post-treatment
- Women with three consecutive negative colposcopies and normal cytology are discharged to routine (triennial) screening
- Women with three consecutive negative colposcopies and cyto ≤ LSIL are discharged to annual screening in primary care