CERVICAL SCREENING AND COLPOSCOPY PATHWAYS

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Cervical Screening Intervals

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Routine Screening Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-49</td>
<td>3 yearly</td>
</tr>
<tr>
<td>50-65</td>
<td>5 yearly</td>
</tr>
<tr>
<td>&gt;65</td>
<td>Only screen those who have not been screened since age of 50 and who have had a recent abnormal smear</td>
</tr>
</tbody>
</table>

**A woman will be invited for yearly cervical screening initially, if she has consecutive yearly normal cervical smears x2, routine screening (3yrly/5yrly based on age) is required thereafter.**  

Natural History of Abnormal Cytology

<table>
<thead>
<tr>
<th>Cytology</th>
<th>Regression at 24 mths</th>
<th>Progression to HSIL at 24 mths</th>
<th>Progression to invasive cancer at 24 mths</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCUS</td>
<td>68.2%</td>
<td>7.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>LSIL</td>
<td>47.4%</td>
<td>20.8%</td>
<td>0.2%</td>
</tr>
<tr>
<td>HISL</td>
<td>35.0%</td>
<td>23.4% (persistence)</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

Natural History of CIN

<table>
<thead>
<tr>
<th>CIN</th>
<th>Regression</th>
<th>Persistence</th>
<th>Progression to CIN3</th>
<th>Progression to invasive cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIN 1</td>
<td>57%</td>
<td>32%</td>
<td>11%</td>
<td>1%</td>
</tr>
<tr>
<td>CIN 2</td>
<td>43%</td>
<td>35%</td>
<td>22%</td>
<td>1.5%</td>
</tr>
<tr>
<td>CIN 3</td>
<td>32%</td>
<td>56%</td>
<td>-</td>
<td>12%</td>
</tr>
</tbody>
</table>
Management of Abnormal Cervical Smear

- Satisfactory but Absence of Endocervical/Transformation Zone Cells
  - Repeat Smear 1 yr

- Unsatisfactory for Evaluation
  - Repeat 2\textsuperscript{nd} Smear 3/12
  - Unsatisfactory
    - Repeat 2\textsuperscript{nd} Smear 6/12
    - Satisfactory & NILM
      - Colposcopy (Non-Urgent)
      - Routine Cervical Screening

- Specific Microorganisms Present
  - Treat Accordingly and Repeat Smear 6/12

- Inflammation
  - Treat infection/atrophy
  - Repeat 2\textsuperscript{nd} Smear 6/12
  - Unsatisfactory
    - Inflammation
      - Colposcopy (Non-Urgent)

\* Satisfactory but absence of endocervical/ TZ cells have fewer concurrent cytologic abnormalities and do not have higher risk for CIN3, repeat smear 1 yr is justifiable vs. earlier repeat smear
Management of Squamous Cell Abnormalities

ASCUS
- Refer to Page 5 Management of ASCUS

ASC-H
- Colposcopy (URGENT)

LSIL
- Colposcopy (Non-Urgent)

HSIL
- Colposcopy (URGENT)

SCC
- Refer Gynaeoncologist (URGENT)
  - Next Gynaecology Clinic

.annotation{font-size: 15px;}
- LSIL is highly associated with HPV infection (~77%), this is too high to allow reflex HPV testing to select women for colposcopy efficiently
- 5-year cancer risk for ASC-H even with HPV- negative is 2%. Thus urgent colposcopy is justified.
- 5-year cancer risk for HSIL is 8%
- In HSIL, 60% has CIN2+ 2% has cancer, this justifies immediate excision of TZ during colposcopy is acceptable
HPV TEST

- Negative
  - Routine cervical screening

- Positive
  - Repeat Smear 6/12
    - ASCUS or Worse
      - Colposcopy (Non-Urgent)
    - NILM
      - Repeat Smear 6/12

Repeat Smear 6/12

- NILM
  - NILM

Colposcopy

- Management of ASCUS

ASCUS carries low risk for CIN3 as one third to two thirds are not HPV-related
HPV test identifies most CIN3 lesion that is justified for colposcopy. At the same time reduce unnecessary colposcopy referral
Negative HPV test is enable early back to routine screening
Alternative: Two repeated smears with NILM is required before going back to routine screening
Direct Colposcopy can be considered if patient is not keen for frequent follow up and repeat smear
Atypical Cells (NOS)

Endocervical cell or Glandular cell

Out-Patient

Colposcopy (Non-Urgent) +
Endocervical Curettage/Brush ±
Endometrial Sampling (Pipelle) if:
- ≥ 35 y.o
- < 35 y.o + abnormal uterine bleeding/ chronic anovulation

Management of Glandular Cell Abnormalities

Atypical Cells favour Neoplastic

Endocervical Adenocarcinoma-in-situ (AIS)

Endometrial Cell

Out-Patient

Colposcopy (Non-Urgent) +
Endocervical curettage +
Endometrial Sampling (Pipelle)

In-Patient

Colposcopy (URGENT) +
Cone Biopsy +
Hyteroscopy and curettage

In women >30 y.o with Atypical Glandular Cells (AGC), 9% is found to be CIN3+ and 3% is found to be cancer

Squamous and glandular lesion often co-exist, half of AIS has CIN (identification of CIN does not preclude AIS or adenocarcinoma)

Endometrial ca risk is low in younger patient and without risk factors

Adenocarcinoma

Colposcopy (URGENT) +
Cone Biopsy

In-Patient

Refer Gynaecologist (URGENT)

In-Patient

Colposcopy (URGENT) +
Cone Biopsy
Abnormal

Any Abnormality

Routine Cervical Smear ± HPV

Any Abnormality

Cervical Smear ± HPV test
6mthly x 2yrs

Atypical Cells (NOS)
Endocervical cell or
Glandular cell or
Endometrial cell

Colposcopy

Colposcopy + Cone Biopsy

CIN 2+ but NO
Glandular Neoplasia

ECC ± Endometrial Sampling

Normal

Review cytology, colposcopy and HPE

Normal

Cervical Smear ±
HPV test
6mthly x 2yrs

Abnormal

Treat Accordingly

Routine Cervical Smear ± HPV

Cervical Smear ±
HPV test
6mthly x 2yrs

In-Patient

Colposcopy

Endocervical AIS

Atypical Cells favour Neoplasia

Management of CIN2/3

See Page 9

Review cyto-
lology, colposcopy and HPE

Normal

Cervical Smear ±
HPV test
6mthly x 2yrs

Abnormal

Treat Accordingly

Routine Cervical Smear ± HPV
Colposcopy Management of No Abnormality/CIN 1
With Cervical Smear of Lesser Abnormalities
- Unsatisfactory/Inflammation x 3
- ASCUS x2
- LSIL

Colposcopy Impression

No Abnormality and no biopsy taken

Suspected CIN 1 and biopsy taken

Relevant HPE 6/52 in Gynae Clinic

No Abnormality/ Confirmed CIN 1

Repeat Smear 1 yr at Gynaecology Clinic

NILM

Abnormal

Routine Cervical Screening

Suspected CIN 2/3

Refer Page 10
Management of CIN 2/3

Repeat Smear 1 yr at Polyclinic

NILM

Abnormal

Routine Cervical Screening

CIN 1 is histological manifestation of HPV infection, regression rates are high, especially in young women, and progression to CIN2+ is uncommon.
Colposcopy Management of No Abnormality/CIN 1
With Cervical Smear of ASC-H or HSIL

Colposcopy Impression

Normal/ Suspected CIN 1

Biopsy Taken

OR

OR

OR

LLETZ
*If completed family

Review 6/52
Gynae clinic

Confirmed Normal/ CIN 1

Cervical Smear
6mthly x 2yrs
*Only if colposcopy is adequate and ECC is negative

NILM
Yearly Cervical Smear

Abnormal

Colposcopy

Cervical Smear + HPV Test
12mthly x 2 yrs
*Only if colposcopy is adequate and ECC is negative

NILM + HPV Negative
Both Visits

HPV Positive or Any Abnormality except HSIL

HSIL

Cervical Smear + HPV test 3yrly

Colposcopy

NILM + HPV Negative
Both Visits

HPV Positive or Any Abnormality except HSIL

HSIL

Cervical Smear + HPV test 3yrly

Colposcopy

Suspected CIN2/3

Refer Page 10

Risk of occult CIN3+ among women with colposcopic biopsy of CIN1 is linked to the risk conveyed by prior cytology (Risk of CIN3+ is 3.8% vs. 15%, if prior cytology was ASCUS/LSIL and HSIL respectively))

Women with HSIL who do not have immediate diagnostic excision require close follow –up.
Management of Colposcopy Impression Suspected CIN 2/3

**Regardless of smear abnormalities**

- Not Completed Family
  - Punch Biopsy
    - Adequate Colposcopy + CIN 2,3 not otherwise specified
      - **For very young and compliant woman with very small focal lesion.**
    - Inadequate Colposcopy/ CIN 3 is specified
      - HSIL/ Colpo worsen/ Colpo persists at 1 yr
    - Colposcopy AND Cervical Smear 6mthly x 1 yr
      - Normal
        - Cervical Smear Yrly
      - Abnormal
        - Cervical Smear OR Cervical Smear + HPV test at 1yr
  - Inadequate Colposcopy
    - LLETZ + ECC/Brush
      - CIN 3/ CIN 2,3 persists at 2 yrs
    - Colposcopy + Biopsy
      - Abnormal
      - Cervical Smear + HPV test at 3yrly
  - Completed Family
    - If adequate Colposcopy
      - LLETZ

- Distinction between CIN 2 and CIN 3 is difficult, regression rates are lower and progression to cancer more common for CIN3
- Women with unambiguous CIN3 have the immediate precursor to invasive cancer and should not be observed regardless of age or fertility concern.
Management of Post-LLETZ Histological confirmed CIN2/3

Review 6/52 Gynae clinic

**Margin Clear**

- Cervical Smear 6mth
  - Normal
    - Cervical Smear 6mth
      - Normal
        - Cervical Smear Yrly x 20yrs
          - Normal
            - Cervical Smear + HPV test 6mth
              - Normal
                - Cervical Smear + HPV test Yrly x 20yrs

  - OR
    - Cervical Smear + HPV test 6mth
      - Normal
        - Cervical Smear + HPV test Yrly x 3yrs

**Margin Involved**

- YES
  - Treatment
    - LLETZ is feasible
      - YES
        - LLETZ
          - Refer to Gynaecologist
            - KIV Hysterectomy
      - NO
        - Yrly Cervical smear + Endocervical brush for 20 years
          - Normal
            - Routine Cervical Screening + HPV test for 20yrs

- NO
  - Conservative
    - Cervical Smear + Endocervical Sampling 6mthly x 2 yrs
      - Normal
        - Cervical Smear + HPV test Yrly x 20yrs

- Completed Family
- Endomargin Involved
- Extensive Disease especially CIN 3
- Not Compliant to F/up

*After 2 negative co-tests in the first 2yrs after treatment, risk is similar to a negative Pap Smear, suggesting a 3yrlly screening.*

*Hysterectomy is unacceptable as primary therapy for CIN2/3.*
SGH CERVICAL SCREENING AND COLPOSCOPY PATHWAY

Management of Post-Cone Biopsy Histologic Confirmed Adenocarcinoma-in-situ

Fertility Sparing

Completed Family

Hysterectomy

Margin Clear

Colposcopy + Cervical Smear + ECC/Brush 6mthly x 2yrs

Completed Family

Margin Involved/ ECC Positive

Colposcopy & Re-excision until Margin Clear

Once

AIS frequently extends into the endocervical canal, complicating determination of desired depth of excision.
- AIS can be multifocal and discontinuous (skip lesion), so negative margins do not provide assurance that the disease has been completely excised.
- After Cone biopsy, risk of persistent disease is 5.9%, progression to invasive adenocarcinoma is 6.7%
- Total hysterectomy remains the treatment of choice for AIS.
- Observation after cone biopsy, carries less than 10% risk of persistent AIS (2.6%) and small risk of cancer (0.1%) even margin is clear.

References:
1. Guidebook for Pap Smear Screening, MOH Malaysia
3. NHSCSP 2010 Colposcopy and Programme Management
COLPOSCOPY APPOINTMENT GUIDELINES

- Please adhere strictly to the allocated slots for specific conditions stated in the appointment book
- If it is filled up, give the next available slot at another date
- If a slot is empty a week before the scheduled date – any patients can be put up for assessment
- DO NOT exceed 10 cases per colposcopy session

- ONLY the following are URGENT cases:
  - HSIL
  - ASC-H
  - suspicious of invasion
  - AGC favouring neoplasia

  **If no empty slot available within this duration, to refer to specialist to slot in the case**

- All squamous cell CA or adenocarcinoma must be seen urgently in the next Gynaecology clinic to assess for a gross lesion (they do not need a colposcopy assessment if there is a gross lesion)

- ASCUS: repeat smear in 6 months or get a non-urgent colposcopy date
- LGSIL: non-urgent colposcopy date
- 3 consecutive inflammatory smears: treat specific infections or with doxycycline & metronidazole and repeat smear before considering a non-urgent colposcopy assessment
  [non-urgent means ‘the next available date at the respective slots for that specific condition’]

- HPV DNA positive (high risk/low risk HPV) with normal smear: non-urgent colposcopy
- HPV DNA positive (low risk or uncertain HPV type) with any abnormal smear: follow the above guidelines on abnormal smears
- HPV DNA positive (high risk HPV) with abnormal smear: treat as an urgent case

- There can only be a maximum of 4 patients with either inflammatory smears or HPV DNA positivity at any given colposcopy session (on a first come first serve basis)