كمنترين كصيحتن
KEMENTERIAN KESIHATAN
MINISTRY OF HEALTH

BRUNEI DARUSSALAM NATIONAL CERVICAL CANCER PREVENTION & CONTROL GUIDELINE 2025

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Foreword

بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

Cervical cancer remains a significant public health concern worldwide. However, it is one of the most preventable and treatable forms of cancer when detected and managed early. With global advancements in screening technologies and a greater understanding of the disease, specific strategic framework can be implemented to improve the outcomes associated with cervical cancer.

In Brunei Darussalam, significant emphasis is placed on promoting cervical cancer prevention and control. Since the introduction of the first National Cervical Cancer Prevention and Control Guideline in 2009, efforts to address cervical cancer have been greatly strengthened. This guideline has led to significant improvements in the quality of cervical cancer screening and the management of the disease. With advancing clinical evidence and technologies, it is imperative to integrate the best clinical practice into the guidelines to ensure ongoing effectiveness and relevance.

In 2020, World Health Organization (WHO) launched a 'Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem' that recommends a life-course action for the elimination of cervical cancer. This strategy advocates that by 2030, 90% of girls worldwide are fully vaccinated with HPV vaccine by 15 years of age, 70% are screened by a high-performance test such as HPV test, and 90% of the women diagnosed received treatment.

Alhamdulillah, with the blessings of Allah Subhanahu Wata'ala, it is with great pride that the Ministry of Health introduce the updated Brunei Darussalam National Cervical Cancer Prevention and Control Guideline 2025 which has been timely developed to align Brunei Darussalam with the above global targets. This revised guideline will therefore serve as a comprehensive resource for healthcare professionals and policymakers reflecting the most current, evidence-based practices and recommendations.

The guideline covers chapters on prevention, detection and management related to cervical cancer. It aims to standardise the clinical practice and treatment for related issues to ensure all healthcare professional practise standardised care in our efforts in the prevention and control in Brunei Darussalam.

One of the most important elements of this updated guideline is the emphasis on the use of Human Papillomavirus (HPV) DNA-based testing as a primary tool for early detection. HPV infection, particularly with high-risk strains, is the primary cause of cervical cancer, and evidence has shown that HPV testing offers a more accurate and reliable method at about 90% sensitivity compared to 60-80% sensitivity with cytology.

This means HPV testing can detect the presence of the virus before any abnormal cell changes occurs, making it a highly effective tool for identifying women at risk of developing cervical cancer. Early detection of these infections is critical, as it allows for timely intervention, preventing the progression of the disease. The accuracy of HPV testing, combined with its ability to detect high-risk infections earlier than traditional methods, is a game-changer in the fight against cervical cancer.

It is therefore my sincere hope that our existing infrastructure, facilities and skilled healthcare professionals shall act as enablers to help us realise the World Health Organization 90-70-90 targets by 2030. Henceforth, I urge all stakeholders to collaborate in improving the quality of our services, with a particular focus on increasing screening participation and enhancing our data management system. Together, let us move forward with renewed vigour, focus and commitment to accelerate the elimination of cervical cancer in Brunei Darussalam.

Yang Berhormat Dato Seri Setia Dr Awang Haji Mohammad Isham bin Haji Jaafar
Minister of Health, Brunei Darussalam

Preface

Cervical cancer remains one of the most significant threats to women's health and well-being worldwide. Hence there is a critical need for robust prevention, early detection, and effective treatment strategies. By leveraging evidence-based practices, public health initiatives, and enhanced access to care, we can significantly reduce its impact on individuals, families, and communities.

The evolving understanding of cervical cancer pathology, coupled with advancements in molecular diagnostics and extensive research has revolutionized cervical cancer screening recommendations. The pivotal role of persistent high-risk human papillomavirus (HPV) infections in the development of cervical cancer have paved the way for more precise, HPV-based screening methods for early detection and prevention of cervical cancer.

This latest update to the National Guideline on Cervical Cancer Prevention and Control marks a significant milestone in the Ministry of Health's ongoing commitment to improving cervical cancer prevention and management in Brunei Darussalam. Replacing the 2009 guideline, this revision incorporates new evidence, including HPV Vaccination Programme, the adoption of HPV testing to detect high-risk viral strains, the critical importance of primary prevention through HPV vaccination, secondary prevention through regular screening and timely diagnosis, and tertiary care with accessible and high-quality treatment options. Additionally, it underscores the value of equitable healthcare delivery, ensuring that all individuals, regardless of their socioeconomic status, have access to these life-saving interventions.

The Brunei Darussalam National Cervical Cancer Prevention and Control Guideline 2025 serves as a comprehensive and invaluable resource for healthcare professionals and policymakers, reflecting the latest evidence-based practices and recommendations. Practical recommendations that can be implemented at various levels of the healthcare system.

The success of this guideline depends on the collective readiness and commitment of healthcare professionals. It is therefore crucial for relevant healthcare professionals to undergo periodic training, conduct regular audits on guideline utilisation and periodically update the guideline as necessary.

Lastly, I would like to commend all the dedicated team members for all their dedications, unwavering commitments and expertise that have made this guideline possible. Together, we continue to intensify our efforts toward the ultimate goal of eliminating cervical cancer in Brunei Darussalam.

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LIST OF ABBREVIATIONS

AGC	Atypical glandular cells
AGUS	Atypical glandular cells of undetermined significance
AIS	Adenocarcinoma in situ
ASCH	Atypical squamous cells cannot exclude an HSIL
ASCUS	Atypical squamous cells of undetermined significance
ASIR	Age-standardised incidence rate
BDCR	Brunei Darussalam Cancer Registry
Bru-HIMS	Brunei Darussalam Healthcare Information and Management System
CCRT	Concurrent chemoradiotherapy
CDC	Centre for Disease Control and Prevention
CGIN	Cervical glandular intraepithelial neoplasia
CIN	Cervical intraepithelial neoplasia
EGD	Endocervical glandular dysplasia
EIRU	Epidemic Intelligence and Response Unit
FIGO	International Federation of Gynaecology and Obstetrics
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
HSIL	High grade squamous intraepithelial lesion

LIST OF ABBREVIATIONS

JCC	Joint Cancer Clinic
LBC	Liquid-based cytology
LEEP	Loop electrosurgical excision procedure
LLETZ	Large loop excision of transformation zone
LSIL	Low grade squamous intraepithelial lesion
LVSI	Lymphovascular stroma invasion
MRI	Magnetic resonance imaging
NCD	Non-communicable diseases
NILM	Negative for intraepithelial lesion or malignancy
O&G	Obstetrics and Gynaecology
Pap	Papanicolaou
PLND	Pelvic lymph node dissection
RCPAQAP	Royal College of Pathologists of Australasia Quality Assurance Programs
SMS	Short Message Services
SCC	Squamous cell carcinoma
TOC	Test of cure
WHO	World Health Organization
WWC	Well Woman Clinic

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Chapter 1
Introduction

1.1 Cervical cancer remains as one of the most common cancers worldwide despite it being a preventable disease. It is also a curable disease if detected early and adequately treated. According to the World Health Organization (WHO), the annual number of new cases of cervical cancer has been projected to increase from 570,000 to 700,000 between 2018 and 2030, with the annual number of deaths projected to increase between 311,000 to 400,000.

1.2 In 2020, WHO launched the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health problem whereby the following 90-70-90 targets must be met by 2030 for countries to be on the path towards cervical cancer elimination:

Strategy	Target
Vaccination	90% of girls fully vaccinated with HPV vaccine by the age of 15 years of age
Screening	70% of women are screened using a high-performance test by 35 years of age, and again by 45 years of age
Treatment	90% of women with pre-cancer treated and 90% of women with invasive cancer managed.

1.3 In 2009, the Ministry of Health introduced the first National Cervical Cancer Prevention and Control Guideline. In 2011, the National Pap Test Registry was established to increase the cervical cancer screening uptake through the call-recall system. Women aged 20 to 65 years are invited to attend routine screening every 3 years through mail invitations.

1.4 In 2012, Brunei Darussalam has shifted from conventional Pap smear to the liquid-based cytology (LBC) which has led to a significant reduction in unsatisfactory Pap test reports to less than 1%.

1.5 In 2012 as well, the HPV vaccination programme was introduced where all female students in Year 7 from both government and private schools were vaccinated. There was a catch-up vaccination programme for female students in Year 11 which was completed in 2015.

1.6 Cervical cancer has declined from being the second most diagnosed female cancer in Brunei Darussalam in 2009 to being the fifth in 2021. The age-standardised incidence rate (ASIR) for cervical cancer has declined from 20 per 100,000 in 2012 to 12 per 100,000 in 2021. This may have been due to multiple efforts of the Ministry of Health Brunei Darussalam to improve the quality of cervical cancer screening and subsequent disease management

1.7 In line with the WHO 90-70-90 targets, there is a need to shift the use of Pap test to a high-performance cervical cancer screening test, which is the HPV test. HPV test detects high-risk strains of HPV which cause almost all cervical cancers. The use of HPV test prevents more pre-cancers and cancer, saves more lives than Pap test, and is more cost-effective hence there is a need to update the National Cervical Cancer Prevention and Control Guideline 2009 which incorporates the new technologies and strategies including screening and management.

1.8 This updated guideline encompasses the following:

- Vaccination
- Screening
- Management
- Laboratory Processes and Quality Control and Assurance
- Data monitoring and surveillance

1.9 In this guideline, HPV refers to high-risk HPV which includes **HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68**.

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Chapter 2
HPV Vaccination

2.1. HPV is the most common sexually transmitted infection in the world. There are over 200 types of HPV and most have no symptoms. However, high-risk types of HPV can lead to chronic infections and pre-cancerous growths including cervical cancer.

2.2 Following WHO recommendations in 2009 based on evidence whereby HPV vaccines demonstrated clinical efficacy in preventing cervical pre-cancer lesions in young adult women, Brunei Darussalam has started implementing the National School-Based HPV Vaccination Programme.

2.3 National School-Based HPV Vaccination Programme

2.3.1 The National School-Based HPV Vaccination Programme was launched on 6th October 2011, and implemented since 2012. The programme aims to vaccinate all female students aged 10–17 years, from both government and private schools nationwide. The programme is managed by the School Health Services Unit under the Health Promotion Centre.

2.3.2 The target group of this programme is female students in Year 7 (aged 10–12 years). From 2012-2015, a catch-up programme was also carried out for those in Year 11 (aged 15–17 years) on top of the Year 7 female students. The HPV vaccine is given on a voluntary basis where written consent from parents or guardians is required before the students can be vaccinated. The workflow for the programme is shown in **Appendix 1**.

2.3.3 From 2012-2021, the bivalent and quadrivalent vaccines were used. However, since 2022 this has changed to the nonavalent vaccine. The types and doses of HPV vaccine used in the HPV Vaccination Programme is based on multiple factors such as the latest evidence and availability of vaccines.

2.3.4 From 2016 onwards, the following schedules were adopted as per WHO recommendations:

- Age **below 15 years old**:

First vaccination	Date of first vaccination
Second vaccination	**6** months after the first vaccination

- Age **15 years old and above**:

First vaccination	Date of first vaccination
Second vaccination	**1** month after the first vaccination
Third vaccination	**6** months after the first vaccination

2.4 HPV Vaccination at Vaccination Centre

2.4.1 The current HPV vaccine given at Vaccination Centre, Health Screening Centre, Berakas as well as Vaccination Units under District Health Offices is Gardasil 9. It is mainly given for women aged **15 to 45** years in a 3 dose-schedule i.e., **0, 2 and 6** months. Clients interested to receive the HPV vaccine, provided they have not received it before and are not pregnant, can book an appointment via BruHealth app under 'Other Vaccination' and request for it when seeing the vaccinator.

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Chapter 3
National Cervical Cancer Screening Programme

3.1 Screening Recruitment

3.1.1 Women aged **25 to 65** years are invited for routine cervical cancer screening through:

a. Mail invitations

b. Ministry of Health's national digital health app i.e., BruHealth

3.2 Screening Recommendations

3.2.1 Screening method: HPV test

3.2.2 Age of starting screening: **25** years of age (only if has been, or currently sexually active)

3.2.3 Frequency of screening: Every **5** years, for routine screening

3.2.4 Age of stopping screening:

- **65** years of age for those who have had **ONE** of the following within the last **10** years:
  - 3 consecutive normal Pap test results
  - 1 HPV not detected result and 2 normal Pap test results
  - 2 consecutive HPV not detected results

3.3 Special Considerations for Screening

a. Immunocompromised patients (Persons living with HIV, undergoing dialysis, on immunosuppressants)
- Frequency of routine screening: Every **3** years

b. During pregnancy
- Should only be done if previous Pap test shows high-grade lesions (CIN2 and above)

c. During postnatal period
- If required, should only be done at least **10** weeks after delivery

d. Post total hysterectomy
- Discontinue screening if indication for hysterectomy is for benign gynaecological conditions and histological report of the hysterectomy specimen is negative for pre-invasive cervical disease

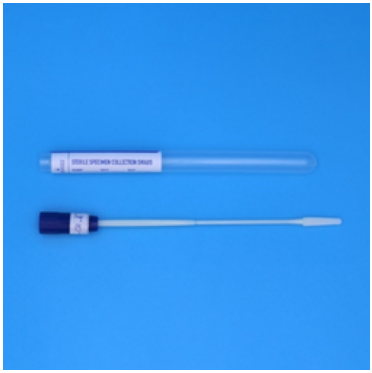
e. Women aged **20 to 24** years old
- Screening is **not** indicated
- However, if screening is still requested, **Pap test** should be performed

f. Women who have received treatment post-colposcopy
- Frequency of routine screening may differ (Refer to **Management of Abnormal Colposcopy**)

3.4 Technical Guidelines on Sampling

3.4.1 All women for routine screening should be offered HPV self-sampling first. The woman will use a kit to collect a cervicovaginal sample (Refer to **Figure 1**).

Figure 1. HPV self-sampling swab kit



3.4.2 In situations where the woman declines self-sampling, then the healthcare professional shall perform HPV LBC.

3.4.3 The following advice shall be given by healthcare professional to woman before sample collection:

- Sample should be taken **at least** 5 days post-menstruation
- **48** hours before sampling, **avoid** the following:
  - Vaginal intercourse
  - Using water jet into the vagina
  - Using cream or intra-vaginal drugs
  - Having a bath.

3.4.4 Technique on how to perform HPV test

a. HPV self-sampling

- Healthcare professional will explain the steps for self-sampling to the woman as demonstrated in the following **Figure 2**.
- The woman will collect the sample herself.

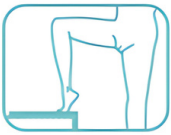
Figure 2. HPV self-sampling technique guide

Panduan Cara Pengambilan Sampel / *Self-Sampling Technique Guides*

Langkah 1: Sebelum Bermula
Cuci dan keringkan tangan. Keluarkan swab dari tiub plastik. Pegang swab pada penutup tiub plastik. Pastikan dayang tidak menyentuh hujung swab bagi mengelakkan dari tercemar.

Step 1: Before starting
Wash and dry your hands. Remove the cotton swab from the plastic tube. Hold the swab on the cap of the plastic tube. Careful not to touch and contaminate the cotton tip.

Langkah 2: Kedudukkan
Tanggalkan seluar dalam. Cari posisi yang selesa. Kemudian letakkan sebelah kaki di atas permukaan yang lebih tinggi untuk memudahkan proses pengambilan sampel.

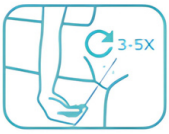


Step 2: Positioning
Remove your underwear. Find a comfortable position. Then place one leg on a raised surface to make it easier for you to collect the sample.

Langkah 3: Memasukkan swab
Pegang swab pada garisan titik putus. Masukkan swab ke dalam saluran faraj secara perlahan-lahan sehingga jari menyentuh alat kelamin luar (vulva) sambil memutar swab ke satu arah.

Step 3: Inserting the swab
Hold the swab at the break-point line. Gently insert the swab into the vagina until your fingers touch the external genital (vulva) while rotating it in one direction.

Langkah 4: Pengambilan sampel
Pada posisi ini, lakukan 3-5 kali putaran atau selama lebih kurang 20 saat secara perlahan dengan putaran ke satu arah. Kemudian keluarkan hujung swab dengan perlahan-lahan. Pastikan dayang tidak menyentuh hujung swab.



Step 4: Taking the sample
In this position, rotate the swab gently 3-5 times or for about 20 seconds in the same direction. Take the swab out carefully and avoid touching the tip of the swab.

Langkah 5: Penyerahan sampel
Masukkan semula swab ke dalam tiub dan beg plastic biohazard yang telah disediakan. Kembalikan bag sampel kepada petugas kesihatan.

Step 5: Sending the sample
Put the swab back into the tube and biohazard plastic bag provided. Return the sample to the attending health professional.

b. HPV LBC sampling

- HPV LBC sampling will be done by a healthcare professional using the following devices shown in **Figure 3**.

Figure 3. Liquid-Based Cytology collection device

i. If a broom-like device is used:

- Insert broom-like device into the endocervical canal and rotate five times in a clockwise direction as shown in **Figure 4**.

Figure 4. LBC collection using broom-like device

ii. If a spatula and cytobrush is used:

- First, insert the contoured end of the spatula and make one full clockwise rotation around the entire exocervix.
- Then, insert the cytobrush into the endocervix until only the bottom most bristles are exposed at the os. Slowly rotate ¼ to ½ turn in one direction.

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Chapter 4
HPV Test Results Interpretation and Management

4.1 Management of HPV test results

4.1.1 **Table 1** below and **Appendix 2** illustrates the management of HPV test results using self-sampling or HPV LBC.

Table 1. Management of HPV test results

No.	Results	Action
1.	HPV **not detected**	Repeat HPV test after **5** years
2.	HPV **detected**	Cytology to be performed • If HPV self-sampling was done ➔ return for Pap test • If HPV LBC was done ➔ no need to return for Pap test as reflex cytology will be done
3.	HPV **detected with abnormal cytology**	Refer for colposcopy
4.	HPV **detected with normal cytology**	a. Repeat HPV LBC after **12** months b. If the results of the repeat HPV LBC (as per **'a'** above) showed: • HPV **detected** with **normal** cytology ➔ repeat HPV LBC again after **12** months • HPV **not detected** ➔ routine screening every **5** years c. If the results of the second repeat HPV LBC (as per **'b'** above) showed: • HPV **detected** ➔ refer for colposcopy, regardless of the cytology result • HPV **not detected** ➔ routine screening every **5** years
5.	**Unsatisfactory** or **inconclusive** HPV result	Repeat HPV test in **6 to 12** weeks using HPV LBC • Refer to respective part of Appendix 2 according to HPV result • If **remains** unsatisfactory or inconclusive, refer for colposcopy
6.	**Unsatisfactory** cytology result	Repeat cytology in **6 to 12** weeks • Refer to respective part of **Appendix 2** if repeat cytology is normal • Otherwise, refer for colposcopy

4.2 Management of HPV Co-testing

4.2.1 Indications for HPV co-testing (i.e., HPV LBC and cytology):

a. Previous **abnormal Pap test** results (including inadequate, ASCUS and CIN 1) and no HPV test done yet
b. **Symptomatic** (i.e., abnormal vaginal bleeding)

4.2.2 **Table 2** and **Appendix 3** illustrates the management of HPV co-testing results.

Table 2. Management of HPV co-testing results

No.	Results	Action
1.	HPV **not detected**	• HPV **not detected** with **normal** cytology ➔ routine screening every **5** years • HPV **not detected** result with **abnormal** cytology ➔ refer for colposcopy
2.	HPV **detected**	Refer to respective part of **Appendix 3**
3.	HPV **unsatisfactory** or **inconclusive** and/or cytology **unsatisfactory**	Repeat HPV LBC and/or cytology in **6** to **12** weeks • Refer to the respective part of **Appendix 3** according to HPV result • Refer to the respective part of **Appendix 3** according to HPV and cytology result • If the repeat HPV or cytology **remains** unsatisfactory or inconclusive, refer for colposcopy

4.3 Referral Guideline

4.3.1 Referral criteria to Obstetrics and Gynaecology Department includes any of the following:

a. Any abnormal cytology result, regardless of HPV result
b. HPV detected for the third time, regardless of cytology result
c. 2 consecutive unsatisfactory or inconclusive HPV results
d. 2 consecutive unsatisfactory cytology results

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Chapter 5
Referral and Clinic Guidelines for Colposcopy

5.1 Colposcopy

5.1.1 Colposcopy is an outpatient diagnostic procedure to examine the cervix, vagina, and vulva using a lighted magnifying device called a colposcope. Colposcopy-directed biopsies are taken from the highlighted dysplastic areas and sent for histopathology. The patient may have slight discomfort during the procedure and simple analgesia is usually sufficient.

5.2 Referral Criteria to Obstetrics and Gynaecology Department for Colposcopy Management

5.2.1 Below is the list of referral criteria to Obstetrics and Gynaecology department for colposcopy:

- Individuals with HPV **detected** result with **abnormal** cytology
- Individuals with a previous HPV **detected** result and normal cytology but at the next 12 months screening, has a second consecutive HPV detected result with an abnormal cytology
- Individuals with **persistent** HPV detected results at **0, 12** and at **24** months regardless of cytology report (total **3** consecutive HPV detected results 12 months apart)
- Individuals with **2** consecutive **unsatisfactory/inconclusive** HPV OR **unsatisfactory/inadequate** cytology results
- Individuals with **suspicious** or **abnormal** appearance of cervix
- Individuals with **symptoms** suggestive of cervical disease after being excluded for infection or contraceptive usage at community level

5.3 Colposcopy Referral Waiting Times

5.3.1 The waiting times to have a colposcopy range from **2** to **6** weeks, depending on each case.

5.3.2 The following **Table 3** serves as a guidance to colposcopy referral waiting times.

Table 3. Colposcopy referral waiting times

Case	Waiting time to have a colposcopy	Standards
Abnormal cytology reported as suspicious of **invasion**, **high** grade dyskaryosis, glandular neoplasia, or **borderline changes** in endocervical cells	Within 2 weeks	At least 93% of women referred for these conditions should have a colposcopy within 2 weeks
Symptomatic individuals or cervix appeared suspicious	Within 2 weeks	
Abnormal cytology reported as **low** grade dyskaryosis, **borderline** changes in squamous cells	Within 6 weeks	At least 99% of individuals must be offered a colposcopy appointment within 6 weeks of referral
Persistent HPV detected results at 0, 12 and at 24 months regardless of cytology report (i.e., total **3** consecutive HPV detected results 12 months apart)	Within 6 weeks	
2 consecutive **unsatisfactory/inconclusive** HPV OR **unsatisfactory/inadequate** cytology results	Within 6 weeks	

5.4 Checklist for Colposcopic Examination

5.4.1 **Table 4** below shows the checklist for a colposcopic examination.

Table 4. Checklist for colposcopic examination

No.	Details
1.	Indication for referral
2.	HPV result and grade of cytological abnormality
3.	Presence or absence of a cervix
4.	Adequate or inadequate examination (for the examination to be adequate the entire cervix and squamocolumnar junction must be seen)
5.	Presence or absence of vaginal and or endocervical extension
6.	Colposcopic features of any lesion
7.	Colposcopic impression of lesion grade
8.	Type of transformation zone (type 1, 2 or 3)
9.	Site of any colposcopically directed biopsies

5.5 Criteria for an Adequate and Satisfactory Colposcopy

5.5.1 The following fulfils the criteria of an adequate and satisfactory colposcopy:

- The cervix is visualised, and
- Full 360 degrees of the squamocolumnar junction is visualised, and
- The entire index lesion/margins of suspicious lesions are visualised, and
- Cytology, colposcopic impressions, and histology are correlated.

Chapter 6
Colposcopy Results and Management

6.1 Results from colposcopy can be divided into the following and must correlate with HPV or cytology results that led to the patient requiring a colposcopy:

a. Results obtained from an adequate and satisfactory
b. colposcopy
   Results obtained from an inadequate and unsatisfactory colposcopy

6.2 The management of the results are tabulated below in **Table 5** and **Table 6**.

a. Results obtained from an **adequate** and **satisfactory** colposcopy (Refer to **Appendix 4** and **Table 5**)

These results can either be:

- No CIN on biopsy, no biopsy taken or normal colposcopic impression
- Abnormal biopsy CIN 1 or worse or abnormal colposcopic impression of CIN 1 or worse

Table 5. Management of colposcopy results obtained from an adequate and satisfactory colposcopy

Result of colposcopy	HPV or cytology results leading to colposcopy referral	Management
a. No CIN on biopsy, or no biopsy taken or normal colposcopic impression	Persistent HPV detected results at 0, 12 and at 24 months regardless of cytology result (i.e., total 3 consecutive HPV detected results 12 months apart)	• Discharge to community and next recall for HPV in **12** months ◦ At 12 months, if HPV **not detected** → return to routine recall HPV test after **5** years ◦ At 12 months, if HPV **detected** → perform **cytology** and **refer** for colposcopy if cytology abnormal
	HPV detected result with low grade cytology or less	• Repeat HPV test in **36** months ◦ At 36 months, if HPV **not detected** → routine HPV recall after **5** years
	HPV detected with abnormal cytology reported as high grade dyskaryosis, borderline changes endocervical	Liaise with Gynae-Oncology Team within 2 months
b. Abnormal biopsy CIN 1 or worse or abnormal colposcopic impression of CIN 1 or worse		Refer to **Appendix 6, 7** and **8**

b. Results obtained from an **inadequate** and **unsatisfactory** colposcopy (Refer to **Appendix 5** and **Table 6**)

Table 6. Management of colposcopy results obtained from inadequate and unsatisfactory colposcopy

Result of colposcopy	HPV or cytology results leading to colposcopy referral	Management
Inadequate or unsatisfactory colposcopy	HPV detected with low grade cytology or less	• Repeat colposcopy in 12months ◦ If repeat colposcopy at **12** months is **inadequate** – offer surgical LLETZ
	HPV detected with abnormal cytology reported as high grade dyskaryosis, borderline changes in endocervical cells	Surgical LLETZ

Further management after surgical LLETZ will depend on the histopathology result.

Chapter 7 Treatment and Management of Abnormal Colposcopy Results

7.1 The choice of treatment depends on the following:

- Patient's age
- Parity
- Preference for future fertility
- Patient's preferences
- Previous treatment history (if present)
- Operator experience and preference
- Full visualisation of transformation zone

7.2 Treatment options

7.2.1. **Table 7** below illustrates the different treatment for abnormal colposcopy result.

Table 7. Treatment options for abnormal colposcopy

Method	Types	Advantages	Disadvantages	Current Practice
Ablation methods – Destroy abnormal cells	• Cryotherapy (for low grade CIN) • Cold coagulation • Laser therapy	• Less invasive compared to surgery • Less complication • Future fertility preserved	• Risk of missing cervical cancer diagnosis	Not available locally
Excisional methods – Removal of abnormal cells	• Large loop excision of the transformation zone (LLETZ) or Loop electrosurgical excision procedure (LEEP) • Electrosurgical needle conisation • Knife cone biopsy • Hysterectomy	• Provides good specimen for histopathology enabling a better diagnosis	• Risk of bleeding • Shorter cervix increases risk of preterm labour and birth • Anaesthesia risk • Inpatient procedure	All types performed currently **Note**: Hysterectomy may be offered in patients who are in perimenopause or menopause

7.3 Management of abnormal colposcopy result (Refer to **Appendix 6, 7** and **8**)

7.3.1 **Table 8** below illustrates the management of abnormal colposcopy results.

Table 8. Management of abnormal colposcopy results

Abnormal colposcopy result	Management	Follow up
a) ASCUS or CIN 1 (borderline changes in squamous cells or low grade dyskaryosis)	Recall in **12** months and perform HPV test	At 12 months, if HPV **not detected** → discharge to community with next recall in **36** months. • At 36 months, if HPV **not detected** → return to routine recall HPV test after **5** years. • At 36 months, if HPV **detected** → to do cytology and refer for colposcopy if cytology abnormal.

		At 12 months, if HPV **detected** → perform cytology.
		• If cytology **abnormal** → for colposcopy. Further management depends on colposcopy examination and report.
		• If cytology **normal** → repeat HPV test in **next 12** months (At 24 months).
		  ◦ At 24 months, if HPV **not detected** → discharge to community with next recall in **36** months.
		  ◦ Subsequently, if HPV **not detected** → return to routine recall HPV test after **5** years.

b) CIN 2 or 3 (Moderate or severe dyskaryosis)	Treatment (Refer to **Table 7**) • Then recall for **test of cure** (HPV test) in **6** months, irrespective of margins	At 6 months, if HPV **not detected** → discharge to community with next recall in **36** months. • At 36 months, if HPV **not detected** → return to routine recall HPV test after 5 years. • At 36 months, if HPV **detected** → refer for colposcopy regardless of cytology result. ◦ The reflex cytology result will be used to correlate with colposcopy.

Abnormal colposcopy result	Management	Follow up
c) CGIN or AGUS **Note**: Synonymous with CGIN are: • Adenocarcinoma in situ (AIS) which is equivalent to high grade CGIN, or • Endocervical glandular dysplasia (EGD) equivalent to low grade CGIN	Treatment (Refer to **Table 7**) **Note**: Hysterectomy is preferred if family is complete. Otherwise, excisional method is recommended. • Then recall for **test of cure** (HPV test) in **6** months	At 6 months, if HPV **not detected** ➔ recall in **12** months. • At 12 months, if HPV **not detected** ➔ discharge to community with next recall at **36** months. ◦ At 36 months, if HPV **not detected** ➔ to do recall **every 36** months at community. • If at any time during follow up screening, HPV **detected** ➔ for colposcopy referral. ◦ The reflex cytology result will be used to correlate with colposcopy At 6 months, if HPV **detected** ➔ perform **cytology**. • If cytology is **normal** or **inadequate** ➔ for colposcopy. ◦ If colposcopy **abnormal** ➔ for Gynae-oncologist input. ◦ If colposcopy **normal** ➔ recall in **12** months for HPV test. ▪ At 12 months, if HPV **not detected** ➔ discharge to community and recall **every 36 months.** • If cytology is **abnormal** ➔ for colposcopy. ◦ If colposcopy **abnormal** ➔ for Gynae-oncologist input. ◦ If colposcopy is **normal** and **no** further **re-excision** (surgical treatment) ➔ HPV test every **12** months (annually) for a total of 10 years and follow up by O&G Team only. ▪ Anytime HPV is **detected** during the annual follow up ➔ for colposcopy.

7.4 Follow-up for **untreated CIN 1** or **ASCUS** (Refer to **Appendix 6**)

7.4.1 Individuals whose results reported CIN 1 or ASCUS and are untreated should have HPV test at **12** months.

7.4.2 At 12 months:

- If HPV not detected → repeat HPV test in 3 years in the community clinic.
  - If HPV **not detected** at **3** years → return to routine screening every **5** years.

- If HPV **detected** → reflex cytology
  - If cytology **abnormal** → colposcopy
  - If cytology **normal** → repeat HPV test in the next **12** months (i.e., 24 months after diagnosis).
    - If HPV **not detected** at 24 months → repeat HPV test in **3** years at the community clinic.
      - ➤ At 3 years, if HPV **not detected** → return to routine screening after 5 years.

7.4.3 For individuals **treated** for **CIN 1** or **ASCUS**, to follow the guidelines for follow-up after treatment for CIN and test of cure (Refer to **Appendix 7**).

7.5 Follow-up after treatment for CIN and test of cure (Refer to **Appendix 7**)

7.5.1 Irrespective of their excision margin status, individuals who have been treated for CIN should have HPV test **6** months after treatment (test of cure).

- At 6 months:
  - If HPV **not detected** → repeat HPV test in **3** years in the community clinic.
  - If HPV **detected** → colposcopy. The reflex cytology result will be used to correlate with colposcopy.

7.5.3 After LLETZ, individuals with moderate to severe dyskaryosis whose excision margins are incomplete should be offered re-excision (repeat LLETZ) if aged above 50 years old.

7.5.3 Follow-up for incomplete excised CIN should continue to 65 years old or until ten years after surgery, whichever is later.

7.6 Follow-up after treatment of CGIN/AGUS and test of cure (Refer to **Appendix 8**)

7.6.1 If the CGIN has been completely excised at the time of first excision or subsequent re-excision, a test of cure (TOC) is done **6** months after treatment. Follow-up should be under O&G Team only.

- If TOC for HPV is **not detected** at **6** months → repeat second TOC sample **12** months later (i.e., 18 months after treatment).
  - After **2 consecutive** TOC for HPV is **not detected** → discharge to community and recall in **3** years.
    - If HPV is **not detected** at 3 years → routine screening at community **every 3** years.

7.6.2 If at **6** months or **18** months after treatment, the TOC for HPV is **detected** → refer the individual for colposcopy. The reflex cytology result will be used to correlate with colposcopy.

- If at 6 months, TOC for **HPV** is **detected** but **cytology** and **colposcopy** are **normal** → repeat second TOC **12** months later.
  - If HPV is **not detected** at **18** months after treatment → discharge to community and recall in **3** years.

- If an **abnormal** cytology result is reported in either of the 6 months or 18 months TOC, the individual must be referred to colposcopy and managed appropriately.
  - If **no** colposcopic **abnormality** is present and re-excision is not appropriate, the individual is required to have **annual** HPV test for **10** years. Patient is to be followed up by O&G Team only.
- If at 6 months and 18 months after treatment, colposcopy is **abnormal** → to discuss with Gynae-Oncologist.

Chapter 8 Management of Cervical Cancer

8.1 Staging

8.1.1 Staging of microinvasive cancer is based on inspection, palpation, colposcopy, endocervical curettage, conisation of cervix and hysteroscopy.

8.1.2 For clinically visible lesion, examination under anaesthesia with cystoscopy is indicated. A proctoscopy is indicated if a rectal mass is suspected per rectal examination.

8.1.3 Other radiology investigations necessary to complete staging include CT scan of thorax, abdomen and pelvis to exclude lymphadenopathy and distant metastases. An MRI of the pelvis may be requested in special cases.

8.1.4 **Table 9** illustrates the International Federation of Gynaecology and Obstetrics (FIGO) staging of cervical cancer (2018).

Table 9. FIGO staging of cervical cancer (2018)

Stage	Description
I	The carcinoma is strictly confined to the cervix (extension to the uterine corpus should be disregarded)
IA	Invasive carcinoma that can be diagnosed only by microscopy, with maximum depth of invasion < 5mm[a]
IA1	Measured stromal invasion < 3mm in depth
IA2	Measured stromal invasion ≥ 3mm and < 5mm in depth
IB	Invasive carcinoma with measured deepest invasion ≥ 5 mm (greater than Stage IA), lesion limited to the cervix uteri[b]
IB1	Invasive carcinoma ≥ 5mm depth of stromal invasion, and < 2cm in greatest dimension
IB2	Invasive carcinoma ≥ 2cm and < 4cm in greatest dimension
IB3	Invasive carcinoma ≥ 4cm in greatest dimension
II	The carcinoma invades beyond the uterus, but has not extended onto the lower third of the vagina or to the pelvic wall
IIA	Involvement limited to the upper two-third of the vagina without parametrial involvement
IIA1	Invasive carcinoma < 4cm in greatest dimension
IIA2	Invasive carcinoma ≥ 4cm in greatest dimension
IIB	With parametrial Involvement but not to the pelvic wall

Stage	Description
III	The carcinoma involves the lower third of the vagina and/or extends to the pelvic wall and/or causes hydronephrosis or non-functioning kidney and/or involves pelvic and/or para-aortic lymph nodes [c]
IIIA	The carcinoma involves the lower third of the vagina, with no extension to the pelvic wall
IIIB	Extension to the pelvic wall and/or hydronephrosis or non-functioning kidney (unless known to be due to another cause)
IIIC	Involvement of pelvic and/or para-aortic lymph nodes, irrespective of tumour size and extent (with r and p notations)[c]
IIIC1	Pelvic lymph node metastasis only
IIIC2	Para-aortic lymph node metastasis
IV	The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. (A bullous oedema, as such does not permit a case to be allotted to Stage IV)
IVA	Spread to adjacent pelvic organs
IVB	Spread to distant organs

When in doubt, the lower staging should be assigned. [a] Imaging and pathology can be used, where available, to supplement clinical findings with respect to tumour size and extent, in all stages. [b] The involvement of vascular/lymphatic spaces does not change the staging. The lateral extent of the lesion is no longer considered. [c] Adding notation of r (imaging) and p (pathology) to indicate the findings that are used to allocate the case to Stage IIIC. Example: If imaging indicates pelvic lymph node metastasis, the stage allocation would be Stage IIIC1r, and if confirmed by pathologic findings, it would be Stage IIIC1p. The type of imaging modality or pathology technique used should always be documented. Source: Bhatla et al.

8.2 Multidisciplinary approach

8.2.1 Cases are discussed with a multidisciplinary team comprising of a panel of oncologists, gynaecologists, gynae-oncology nurses, and pathologists at the Tumour Board Meeting once monthly, whereby a management plan is drawn.

8.2.2 The management plan is further discussed with the patient and/or family members in the Joint Cancer Clinic (JCC) in Obstetrics and Gynaecology Department at Raja Isteri Pengiran Anak Saleha Hospital every Wednesday morning.

8.2.3 The JCC aims to arrive at definitive staging of the cancer and initiate primary treatment without delay. The clinic offers initial clinical evaluation and counselling by oncologists. In addition, the JCC provides arrangements for further treatment such as surgery, and rapid referral to The Brunei Cancer Centre (TBCC) at Pantai Jerudong Specialist Centre (PJSC) for radiotherapy, brachytherapy or chemotherapy, respectively.

8.3 Treatment modalities for cervical cancer

8.3.1 Different types of treatment are available for cervical cancer. Similarly, treatment options are dependent on multiple factors as outlined below:

a. Patient factors
- Age
- Preference for future fertility
- Medical comorbidities
- Social status
- Personal preferences

b. Disease factors
- Stage of disease
- Type of histopathology

c. Facilities and availability of resources
- Surgical modalities and expertise available

(Radiation, chemotherapy, vaginal brachytherapy, and immunotherapy are available at TBCC at PJSC, Brunei)

8.3.2 Surgery is the recommended treatment for early stages of cervical cancer (i.e., stages 1A1 to 1B2). Radiotherapy may be considered as an alternative treatment in selected early-stage disease if surgery or anaesthesia is contraindicated (for example, due to medical comorbidities).

8.3.3 Concurrent Chemoradiotherapy (CCRT) is the standard of care for Stage 1B3 and 2A2. CCRT includes Intracavitary radiation therapy and external beam radiation therapy. Surgery is also feasible in patients with stages 1B3 and 2A2, however 80% of them usually require adjuvant radiotherapy.

8.3.4 Adjuvant radiotherapy or adjuvant chemoradiation may be recommended for cases with any lympho- vascular stroma invasion (LVSI), parametrial invasion or unclear / positive margins or positive lymph nodes.

8.3.5 Cases with positive margins, large or deeply invasive tumours, parametrial or vaginal involvement, or extensive LVSI may be considered for vaginal brachytherapy.

8.3.6 Palliative radiotherapy as a short course is very effective in palliation of distressing symptoms such as pain and severe vaginal bleeding.

8.4 Summary of treatment modalities recommended according to stage of cervical cancer.

8.4.1 **Table 10** below is a summary of the treatment modalities recommended according to the stage of cervical cancer.

Table 10. Summary of treatment modalities recommended according to stage of cervical cancer

Stage	Recommended treatment	Alternative if surgery/ anaesthesia contraindicated
1A1	Simple extrafascial hysterectomy If fertility desired, cervical conisation	Intracavitary radiation therapy
1A1 with LVSI	Modified radical hysterectomy +/- PLND	
1A2	Modified radical hysterectomy +/- PLND	
1A2 – 1B1	If fertility desired: • Cervical conisation + PLND or • Radical trachelectomy + PLND	Intracavitary radiation therapy +/- external beam radiation therapy
1B2	Radical Hysterectomy + PLND	
1B3 and 2A2	CCRT (platinum based) +/- Radical Hysterectomy	CCRT
2B – 4A	CCRT + Palliative surgery	
4B	CCRT +/- Palliative radiotherapy	

Chapter 9
Special Considerations

9.1 Management of benign endometrial cells in cytology report

9.1.1 Benign endometrial cells are only reported in individuals aged 40 and above. The significance of this depends on the phase of the menstrual cycle, medication, clinical history and age of the individual. A gynaecological opinion is indicated if the day of menstrual cycle is not known, and/or patient gives a history of abnormal bleeding.

9.2 Management of cytology report with absent endocervical cells

9.2.1 **Absent** endocervical cells and HPV **not detected** routine screening of HPV test after **5** years. There is no need to repeat cytology if HPV is not detected.

9.3 Management of pregnant individual with suspected cervical disease and diagnosed cervical cancer

9.3.1 Cervical cancer is the most common gynaecological malignancy diagnosed in pregnancy. The incidence rate in the United Kingdom is 0.1 to 12.0 per 10 000 pregnancies.

9.3.2 Pregnancy is not a contraindication for colposcopy. A pregnant individual who meets the criteria for colposcopy should be examined in the colposcopy clinic and performed by an experienced colposcopist. If an individual declines assessment in early pregnancy, they should be seen for colposcopy postpartum.

9.3.3 The primary aim of colposcopy in a pregnant individual is exclusion of invasive disease and to defer biopsy or treatment until the delivery has taken place. However, biopsy or excision may be reserved for clinically indicated individuals such as those with high grade disease or concerns about cancer.

a. If CIN 1 or less is suspected
   - The individual should be managed as per **Appendix 6**.

b. If CIN 2 or CIN3 is suspected
   - Repeat colposcopy at the **end** of the **second trimester** (**before 28** weeks gestation). Unless the pregnancy has already advanced beyond that point, repeat colposcopy at **3** months following delivery.

c. If invasive disease is suspected

- If invasive disease is suspected, clinically or colposcopically, a biopsy is essential to make the diagnosis. Excisional treatments are safe in pregnancy in the first and second trimester.
- All excisions are associated with a risk of haemorrhage and such biopsies should be taken only if appropriate facilities are available to deal with haemorrhage. Punch biopsy suggesting CIN only cannot reliably exclude invasion.

9.4 Staging of cervical cancer in pregnancy.

9.4.1 This is primarily based on clinical examination and the FIGO 2018 staging system for cervical cancer.

9.4.2 Pelvic magnetic resonance imaging (MRI) is considered first line radiological imaging for staging. It is safe at any gestation. If any distant metastases are suspected, an abdominal MRI can be considered. The use of contrast is not essential.

9.4.3 An ultrasound may be beneficial in assessing any maternal hydronephrosis. However, differentiating cause of hydronephrosis during pregnancy may be difficult owing to physiological hydronephrosis.

9.4.4 A chest x-ray may be considered to exclude lung metastases.

9.4.5 A risk stratification approach by performing laparoscopic lymphadenectomy is an option for pregnant individuals with stage 1 disease prior to 22 weeks gestation. A positive lymph node would denote a need for urgent treatment (chemotherapy in second trimester).

9.5 Treatment of cervical cancer in pregnancy

9.5.1 A multidisciplinary team will discuss individual cases and recommend a treatment plan as per guidelines and patient preferences. According to the initial stage at diagnoses, the treatment options vary from surgery, neoadjuvant chemotherapy, and conservative approach until after delivery.

9.5.2 Neoadjuvant chemotherapy can only be commenced **after** 14 weeks gestation (in second trimester) due to 10-20% risk of major foetal malformations if started in the first trimester. Evidence showed no difference in foetal malformations with chemotherapy from second trimester onwards. Chemotherapy is **not recommended** beyond 35 weeks gestation. Carboplatin and paclitaxel regimens are used and can be weekly or 3-weekly. A 3-week gap is recommended between the final dose of chemotherapy to elective caesarean section to take into account the risk of neutropenia.

9.5.3 Treatment of cervical cancer in pregnancy at different stages is as follows:

a. Early stage 1A1 with no LVSI
   - Cone biopsy is first line and can be performed **between** 14 weeks and 20 weeks of gestation.

b. Stages 1A1 with LVSI, 1A2 and 1B1
   - Gold standard treatment is radical hysterectomy with bilateral salpingectomy with or without bilateral oophorectomy and bilateral pelvic lymphadenectomy.
   - If diagnosis was made **prior** to 22 weeks gestation, a staging PLND should be performed.
     - If PLND is positive, then a termination of pregnancy should be considered. If this is not acceptable to patient, offer neoadjuvant chemotherapy (from second trimester).
     - If PLND is negative, offer a simple trachelectomy or option to delay treatment until after delivery. A simple trachelectomy carries a 20-30% risk of preterm delivery hence a cervical cerclage is routinely performed with the procedure. Other risks include blood loss and poor foetal outcomes.
   - If diagnosis was made **after** 22 weeks gestation, offer neoadjuvant chemotherapy or delay treatment after delivery.

c. Stage 1B2

- Diagnosis **before** 22 weeks gestation, offer neoadjuvant chemotherapy (from second trimester). If the individual wishes for termination of pregnancy, a radical hysterectomy with bilateral pelvic lymphadenectomy can be performed with the foetus in situ.
- Diagnosis **after** 22 weeks gestation, offer neoadjuvant chemotherapy. Delivery via elective caesarean section should be planned at an appropriate gestation. After delivery of the baby, the patient may proceed with radical hysterectomy and pelvic lymphadenectomy.
- If chemotherapy is declined, an observational approach could be employed until after delivery, when surgical treatment can be undertaken.

d. Stages 1B3 and above

- Neoadjuvant chemotherapy is the mainstay treatment until delivery takes place. This may be followed by surgical treatment or chemoradiation depending on the initial stage and response to chemotherapy. For those with advanced disease, the main aims of treatment are for palliative and control of disease rather than curative.

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Chapter 10 Laboratory Process and Quality Control and Assurance

10.1 Laboratory-based HPV molecular testing

10.1.1 Sample types

a. Liquid based cytology (e.g., BD SurePath)
b. Self-collected vaginal swab

10.1.2 Preanalytical process

a. Check the details of the patient on the sample received matches with the details on the request form.
b. Register the sample into the Bru-HIMS.

10.1.3 Analytical process

a. Perform DNA extraction.
b. Perform PCR.

10.1.4 Post analytical process

a. Release the result in Bru-HIMS as
    - Detected (for HPV16, HPV18 or HPV-HR)
    - Not detected
    - Unsatisfactory (where the sample is not suitable for testing)
    - Inconclusive (where the sample is producing inconsistent results)

10.1.5 Quality Control and Quality Assurance

a. Internal quality control is required to assess the adequacy of the human DNA material present in the sample.
b. Positive and negative PCR quality controls should be in place to ensure the reproducibility of the assays and to reduce the risk of contamination.
c. To ensure accurate and reliable results, participation in the external quality assurance HPV programs such as RCPAQAP for continuous quality and performance monitoring is necessary.

10.2 Cytology for HPV detected results

10.2.1 Sample types

- Liquid-based cytology

10.2.2 Preanalytical process

a. Check the details of the patient on the sample received matches with the details on the request form.
b. Register the sample into the Bru-HIMS.

10.2.3 Analytical process

a. Prepare the sample by adding cell enrichment solution.
b. Prepare the slides for staining procedure.
c. Run the staining protocol on the slides.
d. Perform quality control on the slides prior to screening.

10.2.4 Post analytical process

a. Screen the processed slides. This is only performed by certified Cytotechnologists or Pathologists.
b. If the finding is ASCUS and above*, the slides will be referred to a Pathologist.
c. The term above includes LSIL, ASCH, HSIL, SCC, AGC, AIS and adenocarcinoma.
d. If the finding is NILM, release the report appropriately.
e. Release the report in Bru-HIMS as per Bethesda Reporting System.

10.2.5 Quality Control and Quality Assurance

a. Quality controls should be in place to ensure the reproducibility of staining quality.
b. To ensure accurate and reliable results, participation in the external quality assurance HPV programs such as RCPAQAP for continuous quality and performance monitoring is necessary.

Chapter 11
Data Monitoring and Surveillance

11.1 Monitoring and surveillance of the cervical cancer screening programme is important to:

a. Evaluate the effectiveness of the screening programme,
b. Identify gaps and areas for improvement,
c. Guide policy and resource allocation.

11.2 The objectives of data monitoring in cervical cancer screening are to:

a. Track registration uptake
b. Monitor clinical outcomes (e.g. HPV-detection rates, follow-up rates, precancerous lesions (CIN), cervical cancer incidence)
c. Estimate cervical cancer morbidity and mortality

11.3 Data sources and collection

11.3.1 Cervical cancer screening in government facilities is conducted in health centres and clinics throughout the country. Cervical cancer screenings are also offered in private health facilities.

11.3.2 Eligible women can either register through:

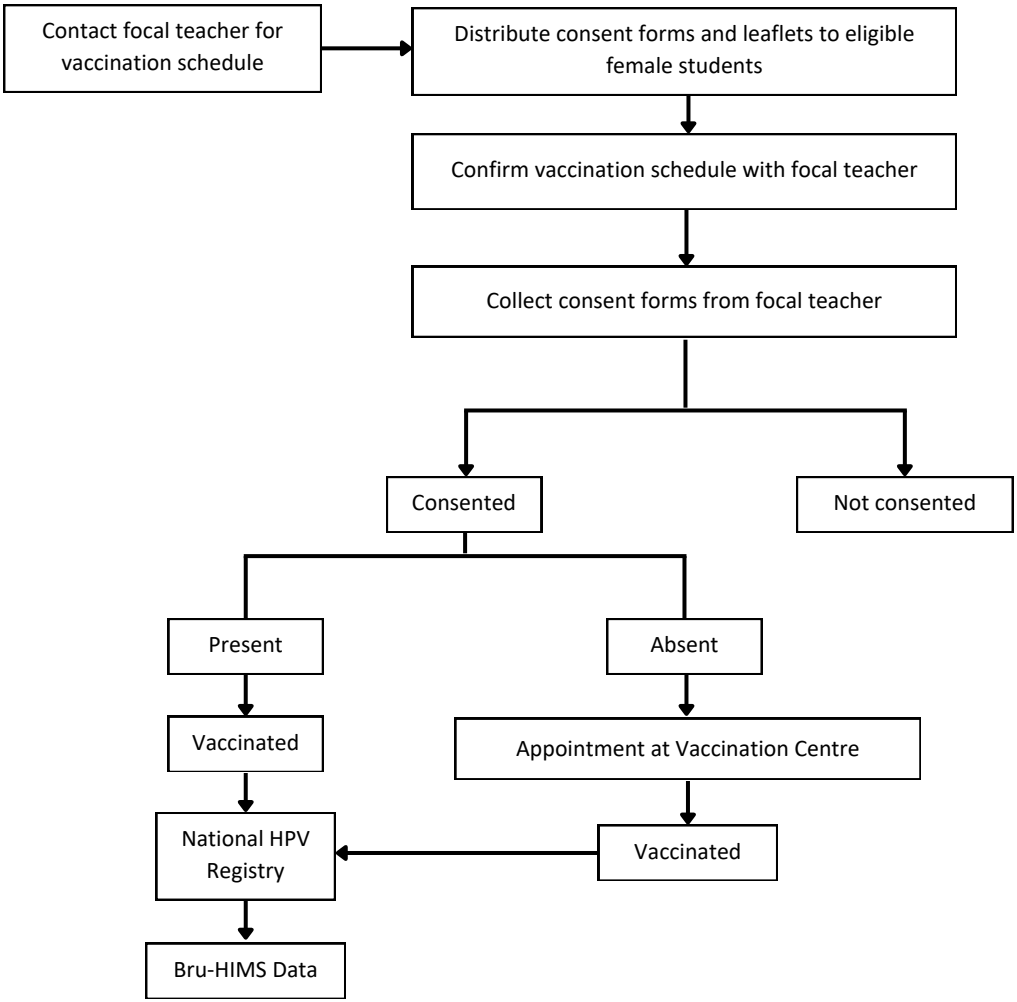
- BruHealth – the Ministry of Health's national digital health app, or
- Book an appointment directly at their nearest health centre or Well Woman Clinic (WWC).

11.3.3 All screening results from government hospitals or healthcare centres are recorded in the Brunei Darussalam Healthcare Information and Management System (Bru-HIMS), a centralized platform that allows for efficient retrieval and management of patient records across government health facilities using a unique number.

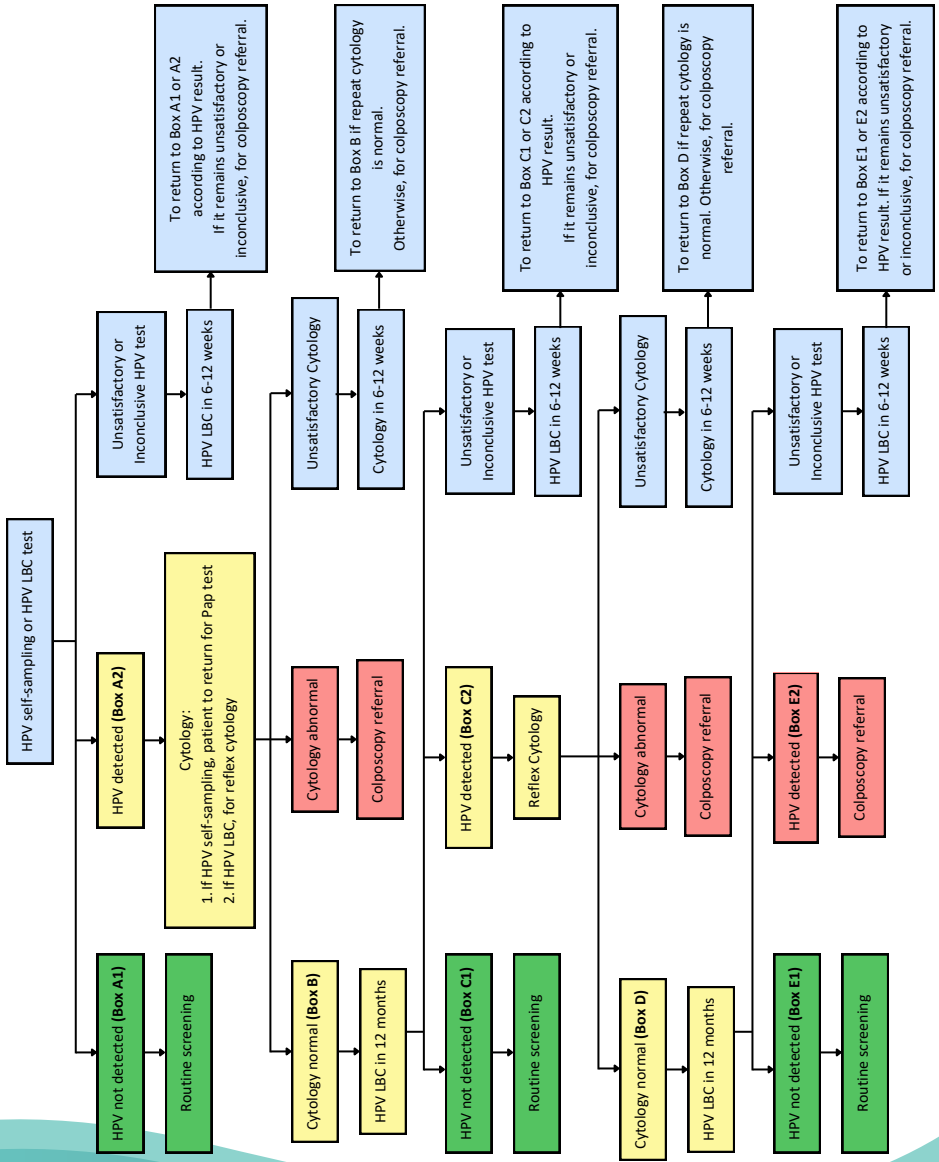
11.3.4 For women undergoing cervical cancer screening, their results can be extracted from Bru-HIMS or the BruHealth workstation's patient databases. These databases are compiled by the Brunei Centre for Disease Control and Prevention (Brunei CDC), which also manages the Brunei Darussalam Cancer Registry (BDCR), a population-based cancer registry where any identified cancer cases are recorded.

Appendices

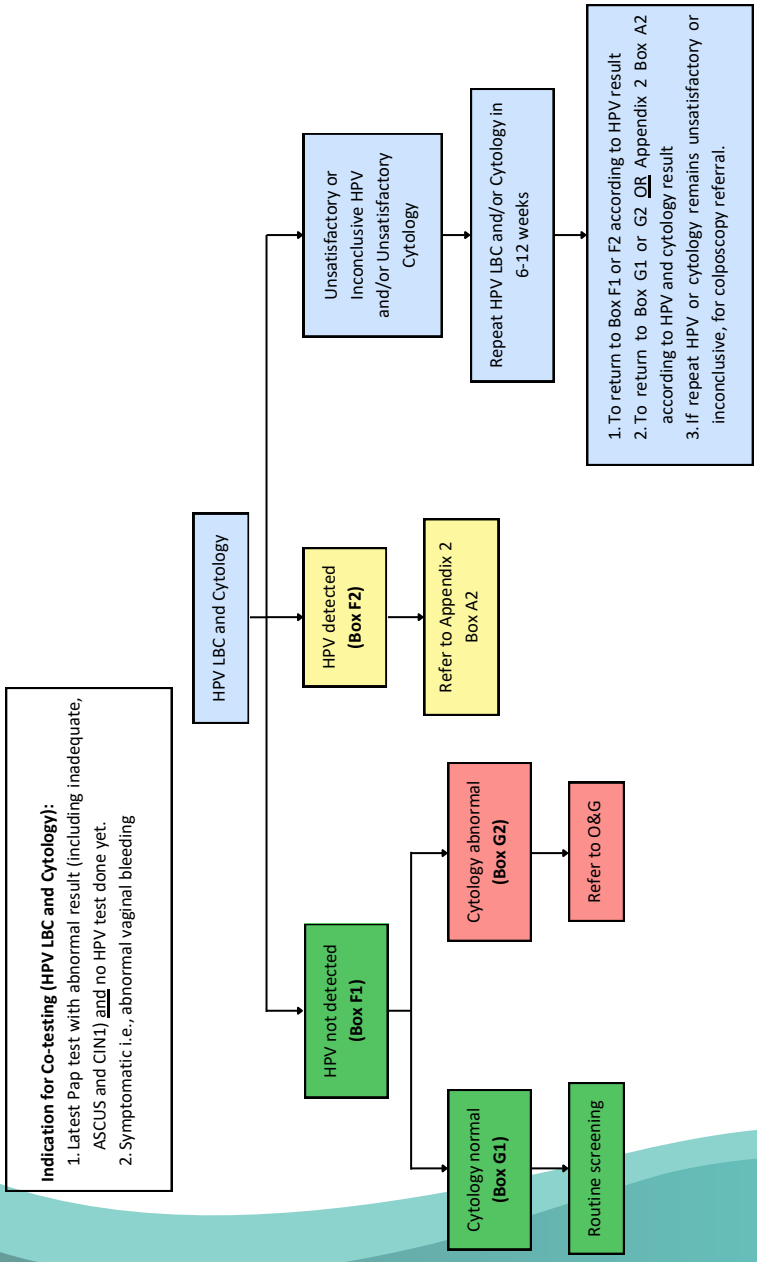
APPENDIX 1
Flowchart on HPV Vaccination Programme in Brunei Darussalam



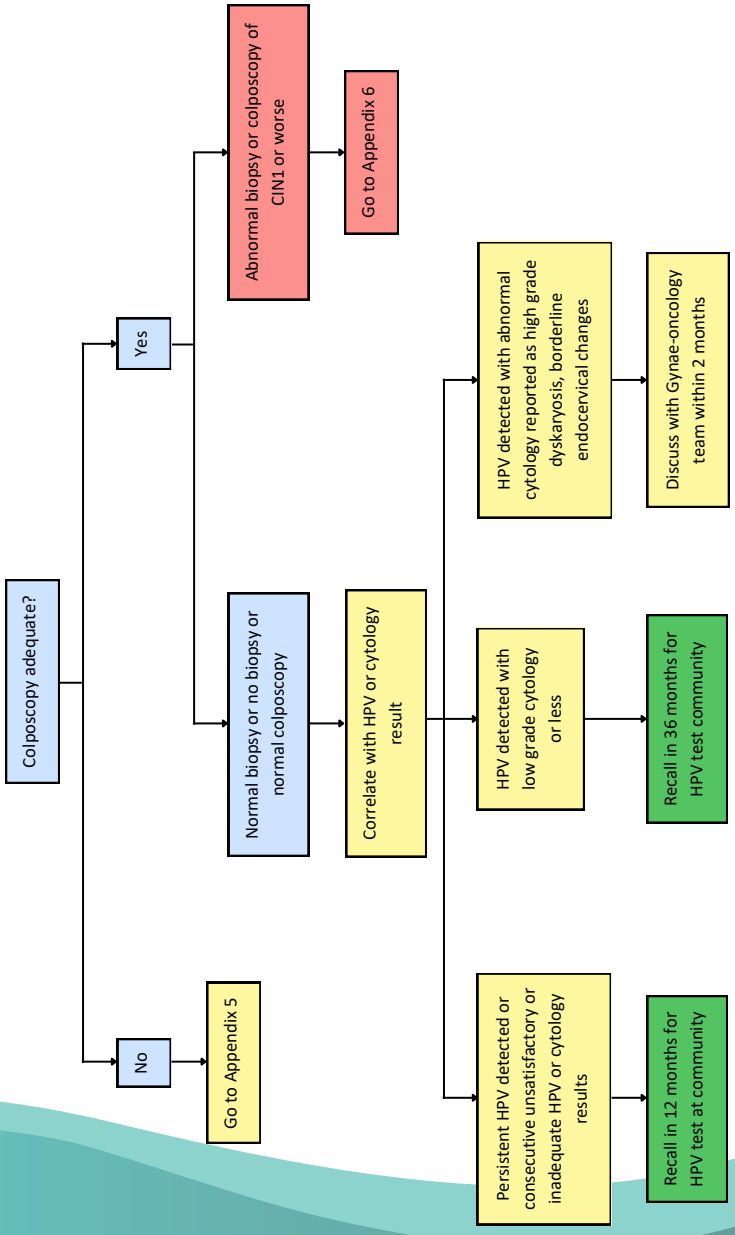
APPENDIX 2
Flowchart on the Management of HPV Test Result



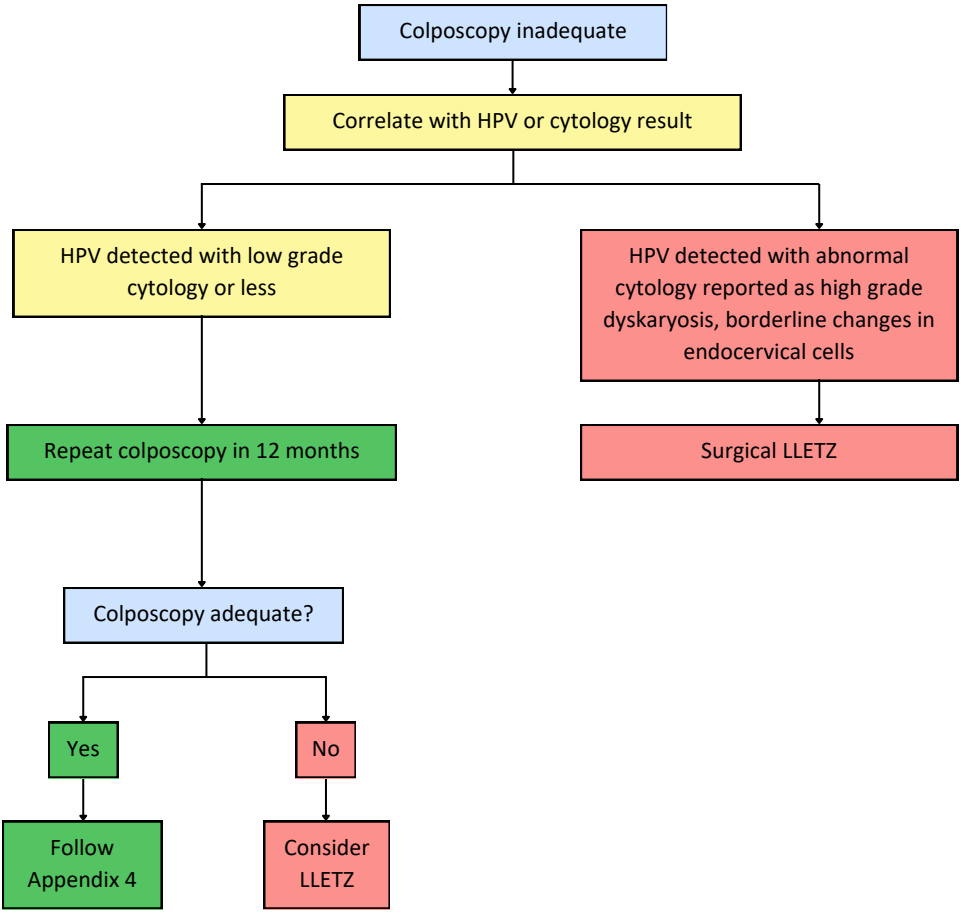
APPENDIX 3
Flowchart on the Management of HPV Co-testing Result



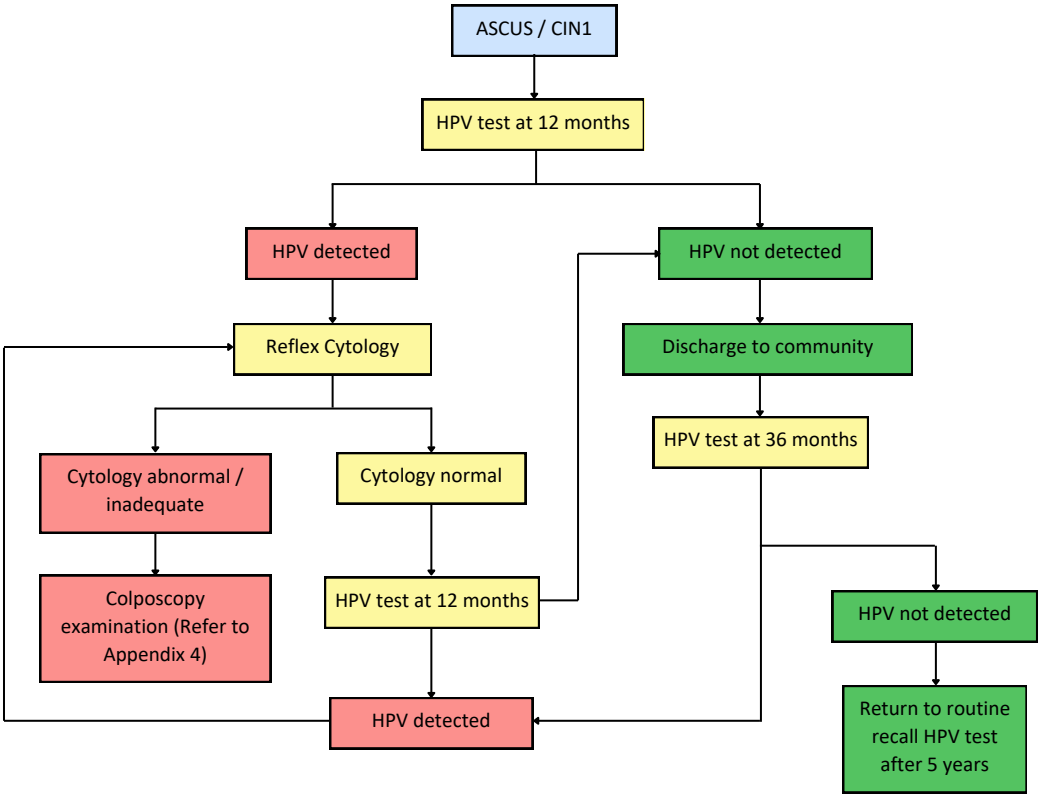
APPENDIX 4
Flowchart on the Management of Adequate Colposcopy



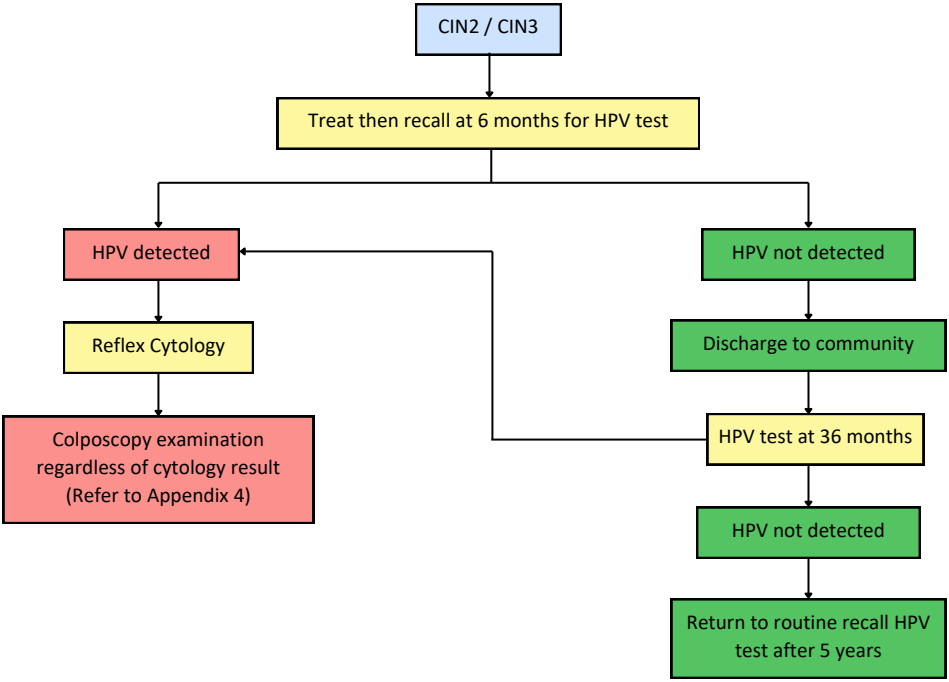
APPENDIX 5
Flowchart on the Management of Inadequate Colposcopy



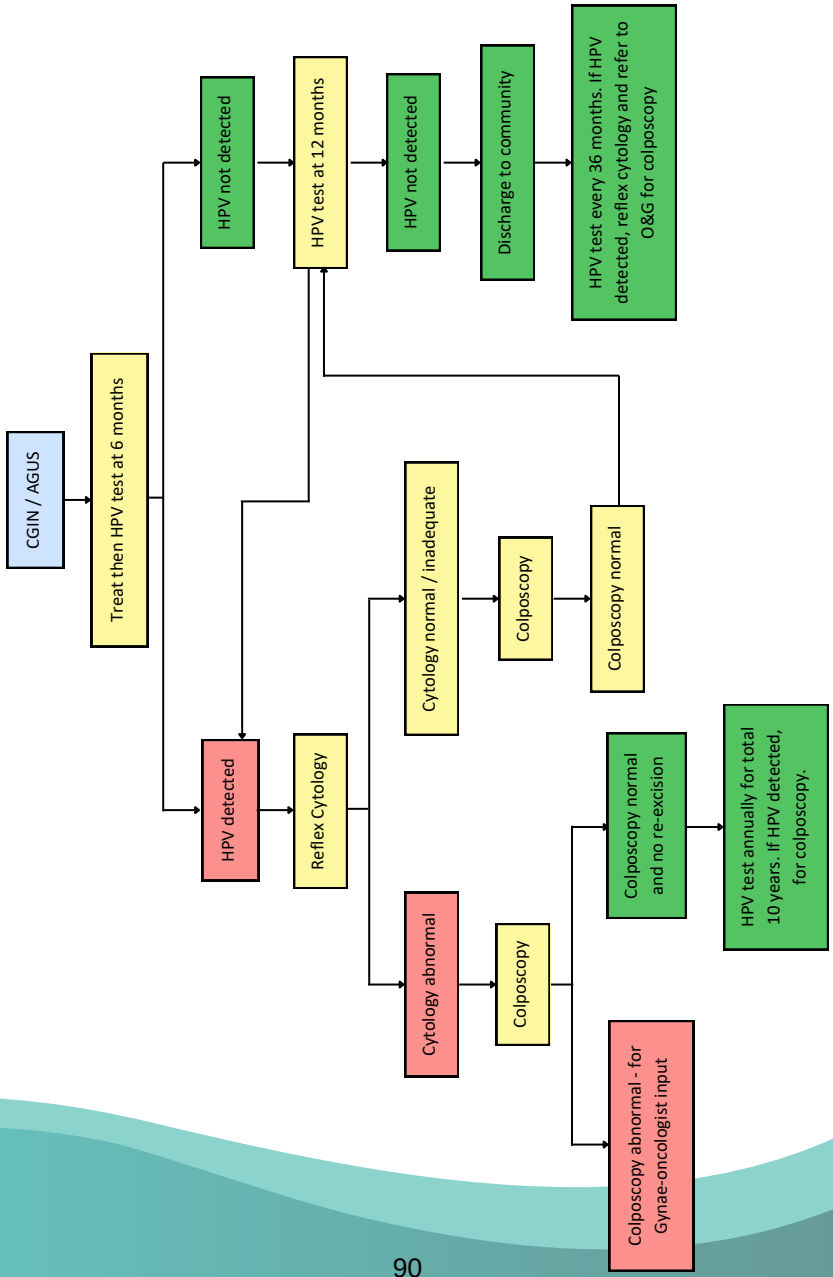
APPENDIX 6
Flowchart on the Management of Adequate Colposcopy with ASCUS or CIN1



APPENDIX 7
Flowchart on the Management of Adequate Colposcopy with Moderate to Severe Dyskaryosis: CIN2 & CIN3



APPENDIX 8
Flowchart on the Management of Adequate Colposcopy with CGIN or AGUS



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