Case Title: **The Case of Mrs. Carol Carmel***

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Case synopsis: A 40 year old woman is referred to her gynecologist for the assessment of a recent pap smear that was reported as a High Grade Squamous Intra-epithelial Lesion (HSIL),

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Case objectives: As part of an adult learning experience the learners should identify what they need to know to solve this patient's case. The learning goal of this case is to facilitate the clinical reasoning skills of the learners.

The authors used published objectives for Association of Professors of Obstetrics & Gynaecology of Canada (APOG), Association of Professors of Gynecology and Obstetrics (APGO) and Council of Residency Education of Obstetrics & Gynecology (CREOG) as guidance for writing these cases.

This case was designed for a small group interactive 2.5 hour seminar – the case may be revised as needed into 2 parts to fit a shorter time frame.

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Box 1

Mrs. Carol Smith, a 40-year-old Gravida 5 Parity 4 Abortion1 woman, is referred to Gynaecologist Dr. James for a “Pap smear”. She is a professional gardener. She recently moved from the United States to Canada and her Pap smear history is unavailable. She believes that she has been having Pap smears done on average every other year. She reports that she has had 2 Pap smears in a row over the last 18 months that have been told to “repeat” as they were reported as unsatisfactory. Her last Pap smear was 6 months ago.

She is a healthy woman with no medical illnesses. Her menstrual cycles are regular and non-painful. She has noticed some intermenstrual bleeding over the last 6 months. She has had 4 uneventful vaginal births and one spontaneous miscarriage. She has a history of genital herpes with mild outbreaks about once every two years.

Her surgical history includes an appendectomy and tonsillectomy as a child. She is not on any medications and reports an allergy to sulfa—this medication makes her feel nauseated. She smokes 5-7 cigarettes daily.

Mrs. Smith wants to know:
- “Why do I have to keep repeating my Pap smear?”
- “I read about a liquid Pap test in the magazine – are you going to use that test?”

1. Address Mrs. Carmel’s questions
2. What is the proper technique for obtaining a Pap smear?
3. Are there any other screening programs this patient should be participating in?

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Box 2

Results of the physical exam: 145 lbs, 5'6". She looks entirely well. Blood pressure 130/85 Heart rate 80. Chest clear, normal heart sounds. Abdomen is non-tender, no masses. There is a small incision in right lower quadrant consistent with previous appendectomy. Gynecological exam reveals a normal vulva and vagina and multiparous cervix. Mrs. Carmel is on the last day of her period and the cervix is slightly obscured with old blood. A Pap smear is done. Bimanual exam reveals a retroverted mobile normal sized uterus and no adnexal masses. Four weeks later her Pap smear result returns to your office. The Pap reports a "high grade squamous intra-epithelial neoplasia". See Figure 1.

Mrs.Smith is "on the line" waiting for the results of her test. You explain the result and she has a number of questions:

- "Is this common?"
- "Could there be a mistake in the Pap smear report?" Why don't we just repeat the Pap smear?
- "What causes this?"
- "What if I quit smoking would it go away?"
- "What are we going to do now?"

1. Address Mrs. Smith's questions.

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Box 3

Dr. James refers Mrs. Carmel for colposcopy. You are a resident completing the month long fabulous fun-filled “lower genital tract rotation”, and this is your first day with Dr. Miller!

Prior to seeing the patient Dr Miller asks you the following
- outline the steps of a colposcopy.
- why do we use acetic acid and Lugol’s solution?
- what is the diagnostic accuracy of a colposcopic impression?

Dr. Miller does a colposcopic examination on Mrs. Carmel. See figure 2: colposcopic appearance of cervix. She cannot see the entire transformation zone. After washing the cervix with 5% acetic acid, she notices an abnormal area, which extends into the cervical os. She asks you to take a look and describe what you can see and then apply Lugol’s solution. After the application of Lugol’s solution the area is non-staining. She asks you to take a biopsy from this area and perform an endocervical curettage (ecc). Her colposcopic impression is that the exam was “unsatisfactory” and Mrs. Smith has at least squamous cell carcinoma in situ.

The colposcopic findings are reviewed with Mrs. Carmel.
She is very nervous and worried:

- “What does it mean that the exam was not satisfactory? How could this have happened? I have been having regular Pap smears! And they have always been normal!”
- “ I heard that it is related to a virus – is it because I have herpes? Should I get the new vaccine for cervical cancer??”

Dr. Miller asks you to address the patient’s questions and then asks the patient to return to clinic in 2 weeks to review the pathology results.

1. Address Dr. Miller and the patient’s questions.

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Box 4

In clinic 2 weeks later, you review Mrs. Carmel's pathology report with Dr. Miller.

Biopsy of cervix: squamous cell carcinoma insitu. See figure 3
ECC: fragments of squamous carcinoma without underlying stroma

Therefore, Dr. Miller states that the colposcopic *evaluation* is carcinoma in situ. Dr. Miller wants to know:

- "Does this patient have cancer?"
- "What is our recommendation for the next step in treatment?"

She discusses the findings and plan for treatment with Mrs. Smith in the clinic. Mrs. Smith asks:

- "If there is a possibility that this is cancer, why not just do a hysterectomy? I just want this cancer out of there!"

1. Address the questions above.

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Box 5

Mrs. Carmel is admitted to the hospital for daycare surgery. She wanted to be asleep for the procedure and chose not to have a Loop Electrical Excisional Procedure (LEEP) done in the clinic setting. She wants to have a Cone Biopsy done because she heard it was “better”.

Dr. Miller asks you if you agree that the Cone Biopsy is better then a LEEP?

You accompany Dr. Miller to the operating room to perform a cone biopsy, Dr. Miller asks you to compare & contrast the technical steps of a LEEP vs a Cone Biopsy.

The cone biopsy is uneventful and the final pathology report follows one week later:

There is extensive CIN III and a focus of invasive SCC. The invasive lesion measures 9mm deep by 11mm wide. The margins are involved with CIN III but the invasive component is 2 mm away from the closest margin. There is no Lymph-vascular space involvement.

- Dr. Miller asks what further investigations, if any, are needed at this point?
- What investigations can be used as part of her “staging”?

1. Address all of Dr. Miller’s questions.

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Box 6

The results of Mrs. Carmel's pre-consultation investigations are seen below

Chest x-ray Normal

Pelvic MRI: Cervical stroma shows signs of post inflammatory change consistent with recent cone. Normal vaginal and parametrial tissues. No evidence of disease. No suspicious pelvic lymphadenopathy.

All blood work (hemoglobin, platelets, liver function tests, blood urea nitrogen and creatinine) normal.

Mrs. Carmel is booked for a post-operative appointment to discuss further management. Before you & Dr. Miller go in to speak with her and her husband, Dr. Miller asks you:

- "What is the natural history of the disease if we do not intervene?
- "What is your recommended treatment?
- "What are her other treatment options?
- "What is the likelihood of success with surgery?
- "What are the risks associated with the operation?"

1. Address Dr. Miller's questions.

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Box 7

Dr. Miller discusses the options with the patient and her husband and recommends a radical hysterectomy and bilateral pelvic lymphadenectomy.

- You describe the procedure and the possible complications.

She has many questions:

- "I am very scared of having my lymph nodes out. Is this really necessary?"
- "Will this treatment cure me?"
- "What is the chance I will need additional treatment?"
- "Why are you not removing my ovaries? My friend had a hysterectomy for uterine cancer and HER doctor insisted she have her ovaries out. I want every precaution taken."

1. Address the patient's questions.

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Box 8

Mrs. Carmel undergoes a radical hysterectomy and bilateral pelvic lymphadenectomy, six weeks after her cone biopsy. The procedure is uncomplicated and the patient is able to be discharged on post op day 5.

The final pathology report: Radical hysterectomy specimen. Cervix contains residual CIN III but no invasive cancer. No parametrial involvement. Normal uterus and endometrium. 8 right pelvic nodes and 10 left pelvic nodes are negative for metastasis.

Mrs. Carmel is seen for follow up 8 weeks after her surgery.

She wants to know:

- “How will I be followed?”
- “What are the chances the cancer will come back?”
- “Should my 24 year old daughter get that vaccine that was in the news?”

1. Address Mrs. Carmel’s questions.

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Box 9

Epilogue

Mrs. Carmel recovered well from surgery. She has recently been seen for her first 3-month follow-up visit. On examination the vaginal vault appeared normal and a Pap smear was taken. She has noticed a change in her sexual function since her surgery—specifically she complains of low desire and difficulty achieving orgasm.

Mrs. Carmel asks “Could these changes be due to the surgery?”

1. Address Mrs. Carmel’s question.

END OF CASE

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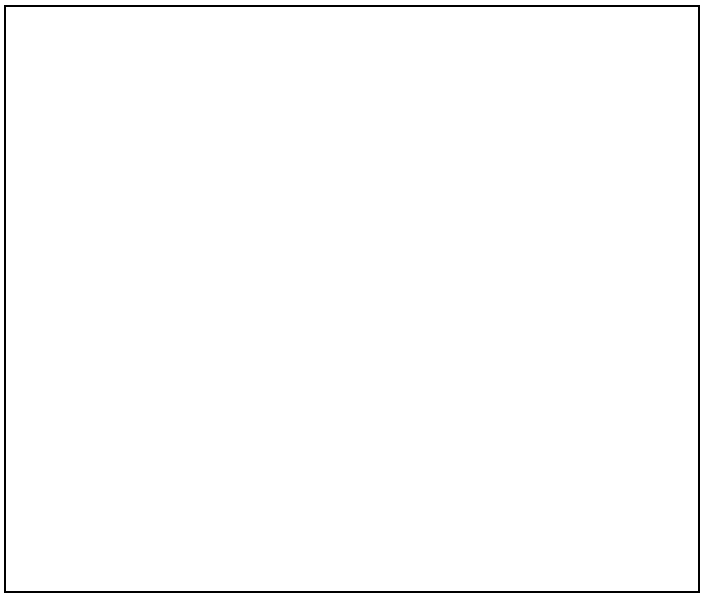
Figure 1



From www.cytopathology.org

Figure 2 Unsatisfactory but negative colposcopic examination

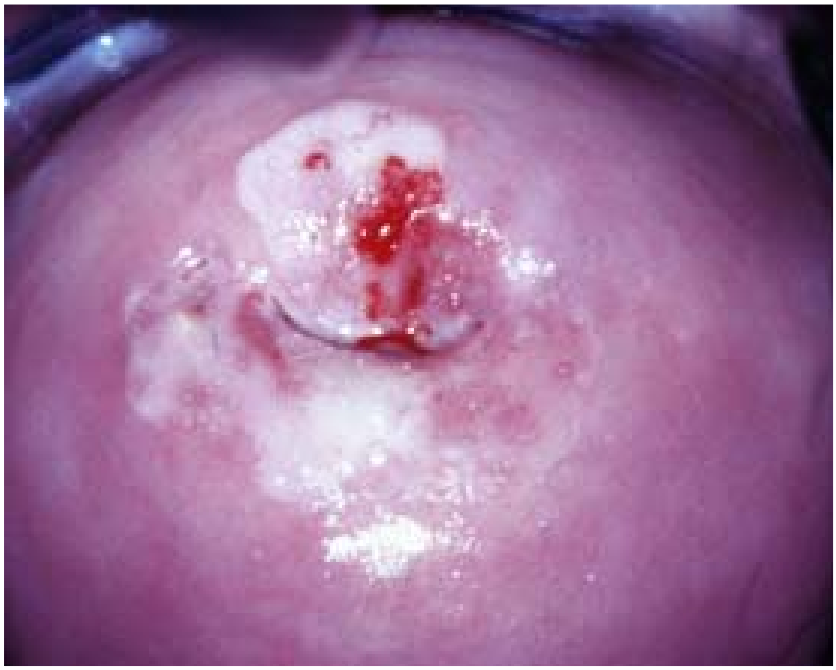


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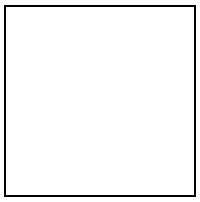
Figure 3



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