Case title: **The Case of Miss Gertrude Marks***

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Case synopsis: A 41 year old woman is referred to a gynecologist for the assessment of abnormal vaginal bleeding in her first trimester of pregnancy.

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Case objectives: As part of the 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 2.5 hour seminar – the case may be revised as needed into 2 parts to fit a shorter time frame.

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Case title: **The Case of Mrs Gertrude Marks***

Box 1

You are a senior resident completing a 3-month elective with Dr. Rush, a busy obstetrician in Nanaimo, British Columbia. Your next patient is Mrs. Gertrude Marks. She is a 41 year old landscape artist. She is here for her first pre-natal visit.

Dr. Rush looked after her during her last pregnancy 3 years ago. She is a Gravida 3 Parity 1 Spontaneous Abortion 1. By her last menstrual period (LMP) she is 10 weeks pregnant, and she is here for her first prenatal visit. She has regular menstrual cycles and is certain about her dates. Your history reveals that she has been having painless spotting during the past 2 weeks, and that she has noticed that her nausea and vomiting is worse than she experienced in her first pregnancy. Her family doctor ordered a serum Human Chorionic Gonadotropiin (hCG) and ultrasound last week to see if everything was normal – she is unsure of the result of the blood test. She is due to have her ultrasound done today.

Her first pregnancy at the age of 36 ended in an uncomplicated spontaneous miscarriage. She was healthy through out her last pregnancy and had a normal spontaneous vaginal delivery of a healthy baby girl. You discover that her most recent Pap smear was at her last post-partum visit.

 Gertrude asks, “Is it normal to have bleeding this early in the pregnancy? I did not have any bleeding with the first pregnancy. Does it mean that I will lose the baby?”

1. Address the patient’s questions.

2. What is your differential diagnosis for the patient’s bleeding at this point?

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Box 2

You do a focused physical exam. Blood Pressure is 135/80. Chest clear. Normal heart sounds. Abdominal exam: soft, non-tender. Uterus is 16 cm above the symphysis pubis and the ovaries are slightly enlarged. A urine dip stick is positive for red blood cells but negative for protein. A fetal Doppler just picks up the maternal heart beat of 80 beats per minute.

The pelvic exam reveals: normal vulva, vagina. The cervix is beefy red and friable when it is touched by the speculum blades. There is a small amount of old blood in the posterior fornix.

Dr. Rush asks you
 "Are these normal findings for this stage of pregnancy?"

Dr. Rush hands you the results of the recent blood test. The serum human chorionic gonadotropin (hCG) hormone result is 256,000 IU/L.

 He asks you "Is this level normal for her estimated gestational age?
 Could you describe how hCG levels change during pregnancy?"

1. Address Dr. Rush's questions
2. What is the differential diagnosis now for her vaginal bleeding?
3. What will be your next step in management?

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Box 3

Dr. Rush tells Mrs. Marks that her uterus is larger than would have been expected by her LMP-- she might be having twins! Dr. Rush suggests you go down to radiology and check out the scan and then let him know what it shows. You accompany Mrs. Marks and bring back a print out of the ultrasound. The radiologist calls Dr. Rush to discuss the findings.

See Fig1: Ultrasound image

Dr. Rush asks you:

- “What are the results of the ultrasound?”
- “What further investigations, if any, are needed at this point?”
- “What is the recommended next step in the management of this patient?”

1. Address Dr. Rush’s questions.

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Box 4

Dr. Rush asks Mrs. Marks to come into the office to discuss the results. He explains the results of the ultrasound and the need for a Dilation and Currettage.

Gertrude wants to know:

- “Are you certain there is no baby?” “How did this happen?”
- “What will happen if we do nothing?”
- “What is the likelihood of success from the operation?”
- “What are the risks associated with this procedure?”

1. Address Gertrude’s questions.

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Box 5

The results of your further investigations are available (below).

Dr. Rush asks you to interpret these results.

Mrs. Marks is booked for a Dilation and Currettage (D&C) the next day. Dr. Rush is happy to supervise you doing the procedure but would like you to outline your approach and describe the operative steps you will perform.

Outline your operative plan for Dr. Rush.

Dr. Rush asks you if there is anything you need to discuss with the anaesthesiologist prior to the procedure?

Lab Test	Patient	Normal Values
WBC	7.4 giga/L	4.0-10.0 giga/L
RBC	4.00 tera/L	3.8-4.8 tera/L
Hemaglobin	123 g/L	120-150 g/L
Platelet count	322 gig/L	150-400 gig/L
Type and screen	Blood type A Rh negative No antibodies present	
hCG	386,000 IU/L	< 5 IU/L (Not pregnant)

1. Address Dr. Rush's questions

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Box 6

The next day you perform a suction D&C. The patient is stable throughout the procedure. The estimated blood loss is 250cc. The next day you are able to review the pathology with the pathologist.

See Fig. 2: gross image

The pathologist asks you to describe your findings, then he asks you "Why is important to distinguish between a partial and complex mole?"

1. Address the pathologist's questions.

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Box 7

You are in Dr. Rush's office 2 weeks later. Mrs. Marks is here for her first post-op visit.

Dr. Rush asks you to review the pathology report prior to seeing the patient.

The final pathology reports "distended and edematous chorionic villi, absent fetal vessels."

Dr. Rush asks you what further management, if any, is needed at this point.

You see Mrs. Marks and she has a number of questions for you:

- "Is everything all right now?"
- "When can I try and get pregnant, I don't want to wait too long because of my age?"
- "What is the chance of this happening again?"

1. Address her questions

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Box 8

After Dr. Rush's discussion with the patient she agrees to delay getting pregnant and goes on the birth control pill. Dr. Rush recommends following her with serial serum hCG and gets the following results:

Sept 1	386000	iu/L	(Normal <5 iU/L)
Sept 7	18,000	iu/L	(Normal <5 iU/L)
Sept 14	5500	iu/L	(Normal <5 iU/L)
Sept 28	10 657	iu/L	(Normal <5 iU/L)
Oct 6	12 323	iu/L	(Normal <5 iU/L)

After her last result, Dr. Rush asks Mrs. Marks to have a chest x-ray done and then to come into the office to discuss the results of all of these tests. The chest x-ray is normal.

In the office, he advises her that the hCG has been increasing rather than decreasing.

Gertrude asks:

- "What do all of these tests mean?"
- "Do I have cancer?"
- "What happens now?"

1. Address her questions

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Box 9

You refer the patient to the Regional Cancer Agency.

Since you recently completed your gynecological oncology rotation at the Cancer Agency, Dr. Rush asks you:

- “Is this patient considered low or high risk?”
- “What is the current recommended treatment for this patient?”
- “What is this patient’s prognosis?”

1. Address Dr. Rush’s questions.

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Box 10

Four months later Gertrude calls your office. She has completed her chemotherapy and has a few questions about her plans for another baby.

Gertrude asks:

- “How soon can she try and get pregnant?”
- “What is the risk of recurrence in future pregnancies?”

1. Address her questions

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Box 11

Epilogue:

Gertrude was followed for one year with monthly quantitative BhCG levels. They remained normal following chemotherapy. Recently she sent a letter to Dr. Rush, telling him that she came off the oral contraceptive pill immediately following her normal one-year follow-up and while she has not yet conceived a pregnancy (one year later), her and her partner have just decided to adopt a baby girl.

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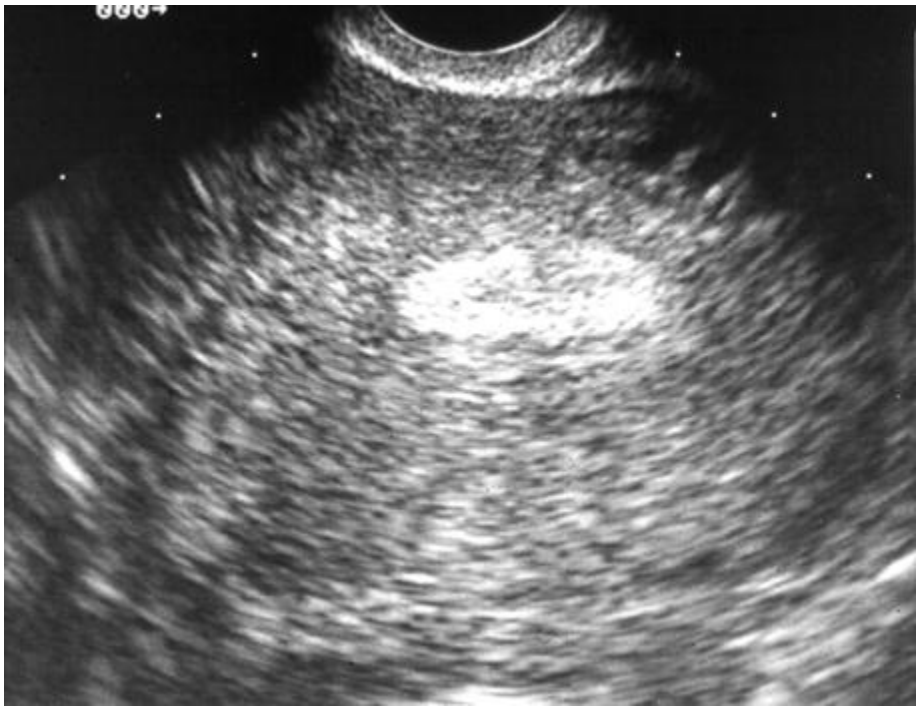
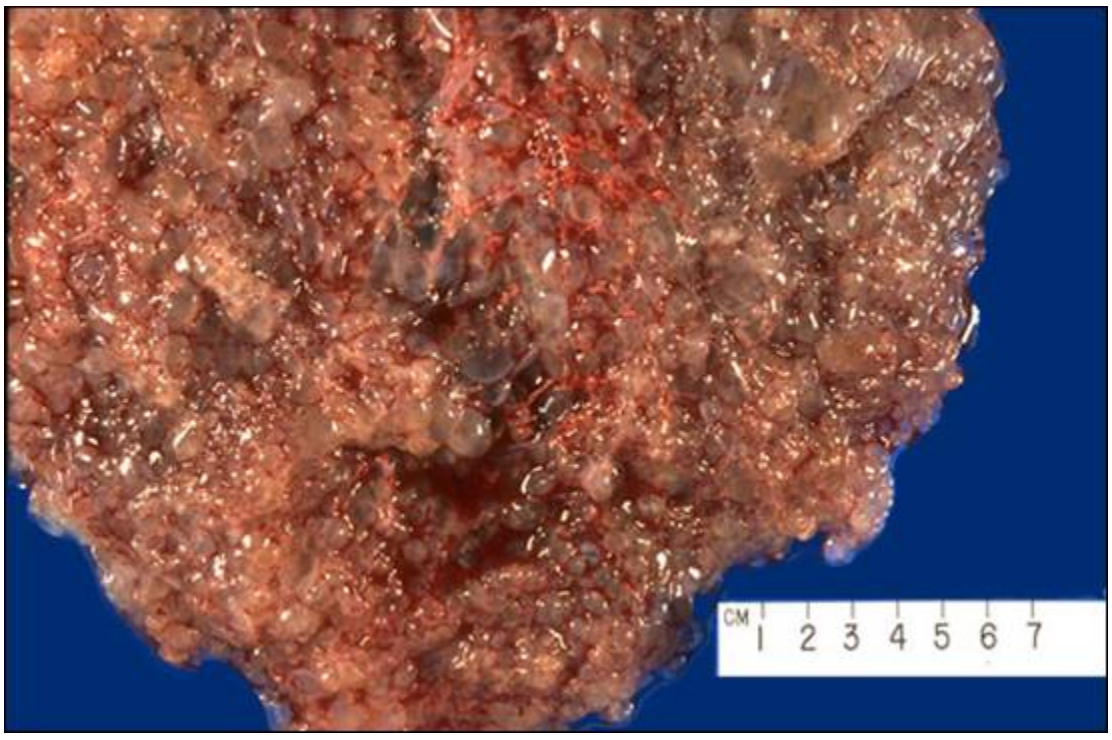
Figure 1 Ultrasound



Accessed on July 15, 2009 from:
http://www.obgyn.ufl.edu/ultrasound/MedinfoVersion/sec5/images/r7531.jpg

Figure 2 Gross pathology



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Accessed on July 15, 2009 from http://www.czmc.cn/jpkc.czmc.cn/bingli-web/photobl/bingli/9.files/image164.jpg

END OF CASE

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