Facilitator's Guide for Gyne-Oncology Interactive Problem Based Cases

- <u>Background regarding the development of these cases:</u>

According to the Royal College of Physicians and Surgeons of Canada all postgraduate training programs must promote the development of skills in self-assessment and self-directed and life-long learning (Program Competency 6.3).

Self directed learning strategies are those that are characterized by the resident having a role in:

1. identifying what they need to know,
2. how they will achieve these learning needs,
3. what resources they will use, and
4. how they will determine that their learning needs have been met.

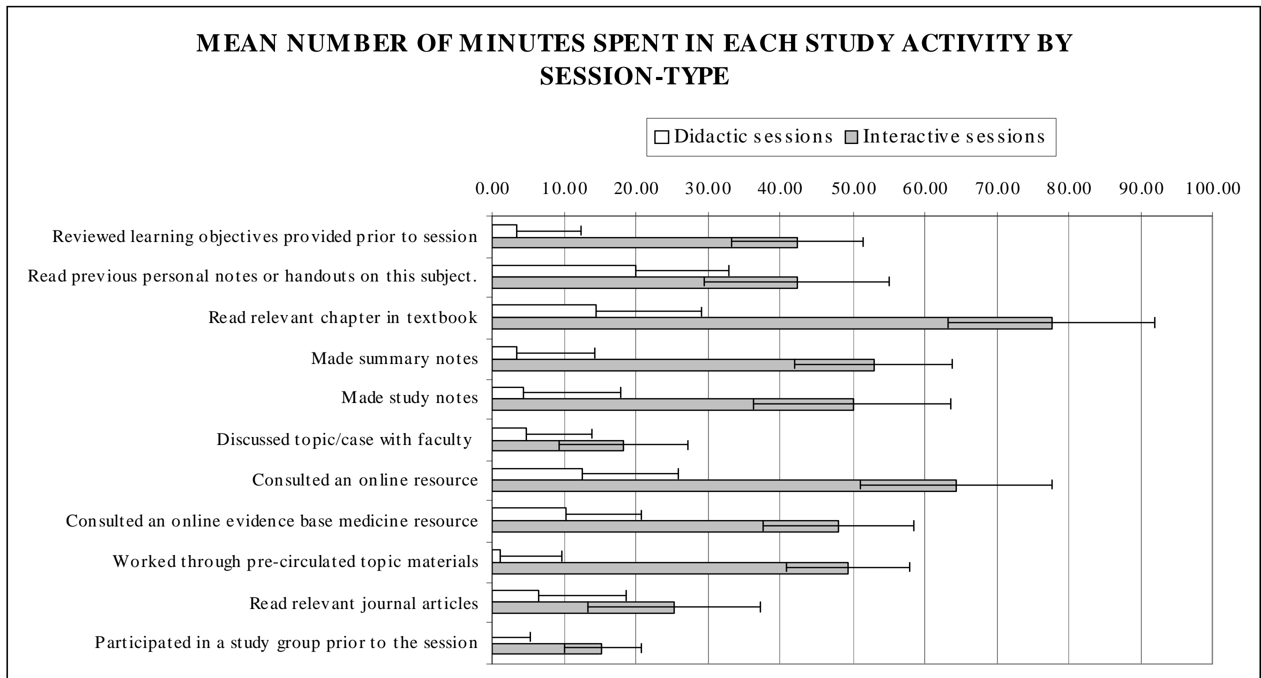
Current literature reveals that postgraduate residents exposed to case-based learning demonstrate higher levels of self-directed study behaviors as compared with those residents only taught with traditional didactic lessons[1]. It has also been shown that medical students prefer case-based sessions because they achieve a greater understanding of the relationship between knowledge and clinical practice[2].

All postgraduate residency programs have a "protected" academic time for their residents to engage in formal educational activities. "What" is studied during this protected time is often determined by a standardized list of specialty-specific learning objectives. "How" this content is studied (didactic presentation, case-based discussion group, etc.) is however often left to the discretion of the individual program director and/or the participating residents.

Perceived problem: It was our impression that the traditional didactic teaching sessions that were taking place in our obstetrics and gynecology resident teaching sessions were not facilitating effective self directed study behaviors. Residents arrived to these seminars with little background preparation and sat thru the sessions as passive observers.

Educational intervention: We developed a series of interactive cases for residents to work thru in their academic half days. We hypothesized that these cases would increase their self-directed study behaviors as compared to traditional didactic lectures about the topics. We assessed the residents study behaviors during their traditional didactic lectures and then during the interactive case based sessions. The residents were emailed our cases one week before the session with the *only* instruction being "come prepared to discuss these cases". Residents were <u>not</u> given specific objectives, and or guidance regarding information sources.

Results: We found that the introduction of these cases resulted in a statistical significant increase in study time spent in all of the following study behaviors - reviewed learning objectives provided, read handouts, read relevant chapter in textbook, made summary notes, discussed topic with faculty, consulted an online resource, consulted an online evidence based medicine resource, worked thru pre-circulated material, read journal articles, and participated in a study group. (See following table).



The residents enjoyed the cases and preferred the interactive format over the didactic sessions. The residents felt more motivated to prepare, more interested in the sessions, they felt the information discussed was more relevant and ultimately they felt more confident in their knowledge base for the topics discussed in the case based sessions. Faculty who facilitated the cases did not receive any explicit instruction other than to facilitate the discussion of the cases and not provide answers to the residents. The faculty enjoyed the cases and felt that after listening to the residents' discussions they had a much better idea as to an individual resident's knowledge base and clinical reasoning skills.

- <u>Purpose of these cases:</u>
  1. To facilitate self directed learning behaviors.
  2. To facilitate clinical reasoning skills.
  3. To facilitate communication skills

These cases could be used in the following ways:

1. Gyne-oncology teachers can use the cases to teach obstetric & gynaecologist postgraduate residents these gyne-oncology topics.

2. Postgraduate ob/gyn residents could use the cases as self-study exercises.
3. Postgraduate ob/gyn residents could use the first part of each case to teach medical students about gyne-oncology topics.

Why are "tutor guides/answers" not provided with these cases?

The cases were meant to facilitate self-directed learning skills. Thus the learner is responsible for finding the information that they need to solve this problem. It defeats this purpose to provide the learner with the answers and or directions as to where to find the answers.

The authors used published objectives for from the 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.

There are many excellent resources that provide the background information relevant to these cases. However classic textbooks do not engage the learner in developing their clinical reasoning skills. While many textbooks and study books may have some self-assessment component to them, in general this involves an assessment of the learners knowledge base "what they know" through multiple choice questions. They do not offer a rich format for assessing "how" they apply and or use that knowledge base. Also these cases provide opportunities for role-playing which will help to develop the communication skills of the residents.

I am not aware of any similar learning resource in this area. The development of each case took hours. The contribution to the field will be that these cases are accessible thru the internet and free to any interested party. The cases are an interactive tool that focuses on the application of knowledge base rather than the assessment of knowledge base.

Can I shorten the cases?

As clinical reasoning is the hallmark of clinical competence, these cases are set up to facilitate clinical reasoning – specifically diagnostic and therapeutic reasoning. In order to shorten the cases, the facilitator could focus on either the diagnostic reasoning portion or the facilitator could begin with the confirmed diagnosis and focus on the therapeutic reasoning portion. The first part of the cases would benefit junior learners and the latter parts of the cases more senior learners.

The first part of each case focuses on diagnostic reasoning; generating a differential diagnosis, gathering information from history and physical, ordering appropriate investigations and analyzing the information to arrive at a presumed diagnosis.

The latter part of the cases focus on clinical reasoning; discuss the natural history of the disease without intervention, recommend an intervention and then discuss the likelihood of success, benefits, risks and side effects of the therapeutic intervention.

What is the role of the teacher?

The role of the teacher is of a facilitator. He or she facilitates the students learning and reasoning skills. Many questions are embedded in the cases that should help to guide the students. The cases were meant to be facilitated by gynae-oncologists who have the background knowledge. The facilitator should strive to encourage students to answer the questions at the appropriate depth for their level of training. Many cases are suitable for “role playing”. The facilitator can role play the patient and the learners can practice breaking bad news to the patient and or addressing the patient’s questions. This would allow the facilitator to also assess the communication skills of the learners. Management of these cases will differ from region to region in our country and thus there is no one “right” answer for many of the embedded questions.

Below I have outlined some guiding principles for expert facilitators to clarify the key points of discussion that should be emerging from the cases. Hopefully this will suffice to provide more orientation as to the purpose of each case.

References:
[1.] Arch Ped Adolesc Med 2001Dec;155 (6):669-72 Impact of Problem based learning on residents’self directed learning
[2.] Am J Obstet Gynecol 2005 Feb;192(2):644-7 *Attitudes of faculty and students toward case based learning in the third year obstetrics and gynecology clerkship*

Guiding Principles for Tutors of Cases

In general all of these cases the resident should given a patient with a gynaecological malignancy discuss: risk factors, etiology of malignant transformation (HPV, estrogen, incessant ovulation, etc.) the way the cancer spreads (direct, blood, lymph), the natural history of the disease, the staging of the disease, the treatment principles and the prognosis.

1. **Case of Edith Edgard:**

Case synopsis:

A 45 year old woman is referred to a gynecologist for the assessment of abnormal vaginal bleeding. Investigations find an early stage endometrial adenocarcinoma. Residents should discuss the sensitivity and specificity of endometrial biopsy, dilation and curettage and ultrasound as diagnostic tools. They should explain the role of unopposed estrogen in malignant transformation. They should debate whether or not lymph node sampling/removal should be routinely done at the time of surgery for suspected endometrial cancer. Finally the evidence for and against the use of local or systemic estrogen in the relief of postmenopausal symptoms should be explored.

Case format:

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.

2. **The Case of Mrs. Virginia Jones**

Case synopsis:

A 50-year-old woman is referred to her gynecologist for the assessment & management of her chronic vulvar itching. Patients presenting with a skin dermatoses and or cancer often have a delayed diagnosis. Patients and physicians assume the diagnosis is yeast. Residents should generate a broad differential diagnosis for vulvar itch that includes infectious, non-infectious, dermatitis, dermatoses and pre-malignant and malignant causes. The patient presents with classical signs of lichen sclerosus and residents should recognize these signs. Residents should outline how to perform a skin biopsy. They should recognize that the patient taking topical steroid therapy could affect the results of a skin biopsy. The patient returns with a new vulvar ulcer that is suspicious for a malignancy. They should be able to discuss why HPV and chronic inflammatory conditions increase the risk of vulvar cancer.

Case format:

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. The first part, boxes 1-6, focuses on the assessment of vulvar itch and management of a investigation of abnormal vaginal bleeding. Boxes 6-11 focus on the management of endometrial cancer.

3. Case of Carol Carmel:

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), investigations find an early stage invasive cervical cancer and the patient is managed appropriately. The residents should recognize that the Pap smear is a good screening test for asymptomatic patients and be familiar with the sensitivity and specificity. If the screening test is abnormal and or the patient is symptomatic the patient needs a diagnostic test – the colposcopic exam. The biopsies performed during a colposcopic exam are samples of the area at risk and in this case do not rule out invasive disease. Thus the patient needs a diagnostic LEEP prior to considering a hysterectomy. The etiology of cervical cancer is multifactorial and residents should discuss the role of smoking, HPV and herpes. Given that this cancer spreads locally surgery and radiation are both options. Residents should compare and contrast primary radiotherapy vs surgical therapy. Residents should be aware of the impact of a gynecological cancer on a woman's sexual health.

Case format:

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. Box 1 – 5 investigation of an abnormal Pap smear. Box 6-9 management of an invasive cervical cancer.

4. The Case of Gertrude Marks

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, investigations find a molar pregnancy and she is managed appropriately. Residents should discuss the appropriate work up of first trimester bleeding and generate a differential diagnosis that includes gestational trophoblastic disease. Residents should discuss how human chorionic gonadotropin rises during pregnancy and the association of hCG with expected ultrasound findings. Residents should recognize the pathognomonic ultrasound & histological findings of a molar pregnancy. They should list the complications associated with a D & C and outline management strategies. Residents should compare and contrast a complete vs a partial mole (etiology, clinical presentation, treatment, prognosis). Given a patient presenting with gestational trophoblastic neoplasia they should recognize the factors that identify a patient as low risk or high risk.

Case format:

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. The first part Box 1-5 focuses on the work up of an abnormal pregnancy. Boxes 6-10 addresses the management of a molar pregnancy and a choriocarcinoma.

5. **The Case of Ophelia Smith**

Case synopsis:

A 40 year old woman is referred to her gynecologist for the assessment of a pelvic mass that was picked up on a incidental ultrasound. Investigations find an early stage ovarian cancer and the patient is managed appropriately. Residents should discuss the limitations of all "screening" tests for ovarian cancer. They should generate a differential diagnosis for an adnexal mass and list ultrasound and clinical features that suggest malignancy. They should discuss the clinical utility of tumour markers. Given a patient with ovarian cancer they should discuss the etiology, natural history, and treatment options.

Case format:
This case was designed for 2.5 hour small group interactive seminar – the case may be revised as needed into 2 parts to fit a shorter time frame. The first part Boxes 1 – 4 focuses on the work up of an adnexal mass. Boxes 5-8 focus on the management of a malignant ovarian cancer.