

Rare Tumors In Gynecologic Oncology Fellowship: A Longitudinal Integrated Curriculum Initiative

Lindsay W Brubaker MD, Brooke Sanders MD, Carolyn Lefkowits MD, MPH
University of Colorado, Division of Gynecologic Oncology, Department of OBGYN



Gynecologic Oncology
UNIVERSITY OF COLORADO

Background & Purpose:

Medical education has embraced a longitudinal integrated approach to training medical students. Built on comprehensive care of patients over time and learning from the patients' providers, this approach is thought to foster humanism and patient-centeredness.¹ Studies have demonstrated both short-term and long-term success of these models.^{1,2}

Rare diseases, while each individually rare, impact 6-10% of the population.^{3,4} Alfaro et al argue that "rare diseases are a threat...as they are life-threatening or chronically debilitating diseases with a low prevalence and a high level of complexity".³ Care of patients with rare diseases is thought to benefit from a patient-centered approach and care coordination.⁴

In gynecologic oncology, we care for a variety of rare malignancies. Literature for these diseases exists in case reports and small case series. While gynecologic oncologists manage their care, there is no existing paradigm for training fellows. Beyond choosing the right treatment regimen, it is critical to understand how to counsel, advocate for, and utilize all available resources to provide optimal patient-centered care. Thus, we aim to train future gynecologic oncologists in the holistic care of patients with rare gynecologic malignancies through a longitudinal integrated approach.

Objective:

Create a longitudinal integrated curriculum for gynecologic oncology fellows to increase exposure to and understanding of rare gynecologic malignancies.

Methods:

- Meetings focused on development and implementation were held with stakeholders, including fellows and faculty.
- The curriculum concept was introduced to fellows and each fellow was assigned to two faculty members.
- A pre-curriculum survey was administered to the fellows.
- Learning objectives were outlined.
- Rare cases were identified, and fellows were incorporated as members of the treatment team, both within the electronic medical record and in clinical practice.
- Each fellow maintains a cohort of patients with rare diagnoses.
- Meetings are held every 6 months to review cases with peer-led literature and case review.
- Online repository has been developed and shared for future use and reference.

Results:

- Five fellows are participating in the curriculum.
- Pre survey found that all fellows felt it was important or very important to have a dedicated curriculum to rare gynecologic malignancies.
- All 5 fellows noted the lack of data to guide management as a significant challenge to the care of these patients. They described identification of resources and national experts, as well as navigation of the literature as the skills that would be most helpful to their practice.
- After the first 9 months of the curriculum, each fellow has a cohort of 2-3 patients.
- Fellows have participated in clinic visits, surgery, multidisciplinary tumor board discussions, and external expert consultation for their patients.
- Cases have included rare diagnoses such as small cell carcinoma of the ovary, cervical cancer in pregnancy, gastric type cervical cancer, and glioblastoma transformed from immature teratoma.
- Follow up assessments show that the fellows are satisfied or very satisfied with the curriculum.
- Most fellows would recommend this longitudinal patient structure in gynecologic oncology education.

Qualitative Feedback:

- "The attendings have become very interested in rare tumors...reaching out to their assigned fellows"
- "Appreciate the collaborative sharing of information...reduces work when similar patients come up in the future"
- "Loved hearing my co-fellows present, I [also] learned a lot from preparing my own presentation"
- "Getting know the patients in a more detailed way...following their course for the past year has been a great learning opportunity"
- "We see these patients for a snapshot in time, or at best months to a year, but in some cases, the lessons will take multiple years to be learned"

Challenges:

Challenges to implementation include varying investment from faculty and navigating the baseline clinical workload for fellows, which often precludes their ability to engage consistently in a longitudinal fashion. Logistical adjustments are underway to increase fellow participation.

Conclusions:

A longitudinal integrated approach to teaching gynecologic oncology fellows about rare gynecologic malignancies is both feasible and impactful.

Next Steps & Future Directions:

- 12 month follow up survey of fellows
- Case presentation and debrief in June 2023
- Continued development of online repository of cases and literature for future reference
- Submission to APGO/CREOG, the annual medical education meeting for obstetrics and gynecology
- Creation of a list of cases of subgroups of rare malignancies to serve as a resource for future case reports and case series
- Expansion of curriculum to other institutions
- Exploration of patient experience of longitudinal fellow involvement

References:

1. Gaufrberg, E., et al., Into the future: patient-centredness endures in longitudinal integrated clerkship graduates. *Med Educ*, 2014. 48(6): p. 572-82.
2. Hirsh, D., et al., Educational outcomes of the Harvard Medical School-Cambridge integrated clerkship: a way forward for medical education. *Acad Med*, 2012. 87(5): p. 643-50.
3. Alfaro, T.M., et al., Educational aspects of rare and orphan lung diseases. *Respir Res*, 2021. 22(1): p. 92.
4. Saggiu, H., et al., mEDUrare: Supporting Integrated Care for Rare Diseases by Better Connecting Health and Education Through Policy. *Yale J Biol Med*, 2021. 94(4): p. 693-702.

Figure 1. Participants reported confidence in specific skills from prior to curriculum initiation to interval evaluation, 6 months into curriculum. On a Likert scale, where 1 = not confident and 5 = confidence you would hope for as an attending Gyn Oncologist. F1= Fellow 1, F2= Fellow 2, etc.

