Screening, Diagnosis, and Treatment Considerations for Ovarian Cancer
A Discussion with

Peter G. Ellis, MD,
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The University of Pittsburgh Medical Center (UPMC) is the second-largest employer in the state of Pennsylvania, with hundreds of sites of service and an extensive network of physicians. The UPMC Cancer Centers operate independently under UPMC and manage all oncology services within the network, including diagnosis, imaging, and treatment. Managed Care Oncology sat down with Peter G. Ellis, MD, Director of Medical Oncology Network for UPMC Cancer Centers to gain his insights on the use of evidence-based clinical pathways in managed care oncology and specifically on the successful Oncology Pathways initiative developed as a collaboration between UPMC Cancer Centers and Highmark Blue Cross Blue Shield.

MCO: What are Oncology Pathways and why are they being developed?

Dr Ellis: Clinical pathways are evidence-based treatment guidelines designed to create consistency in treatment decisions for physicians. At UPMC, we call them Oncology Pathways and the program actually started as both a quality assurance program as well as a cost-control initiative. In medical oncology alone, we have 25 sites of service, with some offices having 3 and 4 physicians and others having only 1. With this extensive provider network, we had survey data that showed concerning levels of variability in treatment patterns, both in terms of costs to the healthcare system and adherence to evidence-based medicine.
MCO: Can you describe the UPMC Cancer Centers’ key steps in the development of an Oncology Pathways program?

Dr Ellis: First, we prioritized which of the many types of cancer we see would be the first to have an Oncology Pathway. This decision was primarily based on volume, so our first set of Oncology Pathways targeted the big 4: breast, lung, colon and prostate.

Beyond volume, we also initiated the development of new Oncology Pathways based upon the requests of our individual physicians. For instance, if there was enough interest in our network for an esophageal Oncology Pathway, then we would work on developing it.

In developing the Oncology Pathways for each individual cancer, we’ve engaged an academic Chair and a community Chair that form and head a committee of academic and community oncologists. The advantage of having academic and community oncologists working together lies in the value of input from two different perspectives. For example, while the academic oncologists are often more familiar with the available literature, a community oncologist can lend the perspective of whether or not a particular dose imposes too high a toxicity for a 75-year-old patient from their extensive experience in treating patients.

In these committees, the process is very rigorous. The committee first reviews the available clinical trial data to determine if there’s one treatment regimen that is superior in terms of efficacy for the particular cancer being targeted. If there is evidence of superiority, that regimen is included on the Oncology Pathway. If there are two or more regimens that are similar in terms of efficacy, the regimen that is least toxic is chosen. Finally, if regimens are similar in terms of both efficacy and toxicity, the less costly to the patient/payer is chosen. Cost is always the last criterion used in determining Oncology Pathway regimens and only when there is no clear winner in terms of efficacy and toxicity.

The committees strive to narrow the choices to one single regimen per line of therapy to meet the needs of the vast majority of patients. The Oncology Pathways process then allows for exceptions to be written for those patients with extenuating circumstances such as neuropathy or diabetes. Outside of reducing treatment variation, the value of having a limited set of standardized regimens is that all parties involved in the care of a patient—oncologists, pharmacy clinicians, nurses—are familiar with the regimen, make fewer errors and can adjust for toxicities as necessary.

After the initial development of the Oncology Pathway, the Chairs perform a quarterly review for new data and, if needed, can call for more frequent meetings if emerging data is especially compelling.

MCO: What level of monitoring is necessary in order to measure and track the adherence to an Oncology Pathways initiative?

Dr Ellis: At UPMC, oncologists utilize a Web-based application in their daily routine to access the Oncology Pathways, enter relevant patient information such as staging and line of therapy and then document their treatment decisions. This process is built into the physician’s workflow by presenting the physician with his patient roster for the day as well as the past patient history as it relates to the Oncology Pathway. As the physician sees each patient throughout the day, they have the Oncology Pathway decision support tool available on a real-time basis, including key supporting tools such as standard regimen order sets, patient education materials, supporting literature from clinical trials and even standard dose adjustments. By providing these tools, participation in Oncology Pathways actually makes the day easier for the physician.

Finally, the Oncology Pathways process culminates in a monthly Quality Assurance review whereby treatment decisions, data completeness and exceptions are reported back to the oncologists including how they compare to other oncologists in UPMC. Additionally, the data is analyzed centrally for trending and potential areas for improvement.

MCO: What is the ideal payer-provider relationship for the development and implementation of an Oncology Pathways program?

Dr Ellis: The relationship between the UPMC Cancer Centers and Highmark
is an excellent example of the ideal environment for an Oncology Pathways initiative. We believe that efforts to improve quality and reduce costs in oncology work best when they are initiated by the providers instead of by the payor, as was the case with UPMC and Highmark. The oncologists must demonstrate a desire and willingness to create and adhere to uniform treatment protocols and self-police their efforts. This attitude was prevalent among UPMC network physicians, as was an understanding that rising cancer care costs (that these Oncology Pathways seek to curtail) will ultimately act as a barrier to patient access to cancer care. With cost management, improved quality of care, and improved access to care as the common goals among UPMC physicians and stakeholders at Highmark, collaboration between the two parties allowed for the successful development and implementation of Oncology Pathways. In return for offering Highmark reduced costs through the Oncology Pathways project, UPMC Cancer Centers maintained control over patient therapy and drug delivery.

MCO: What are some of the key implementation risks involved with an Oncology Pathways program?

Dr Ellis: The risks involved in imple-
mentation of Oncology Pathways fall into 3 major areas. First, for the program to be successful, your physician leadership in the development of credible, evidence-based protocols is essential. The Chairs responsible for the development and maintenance must be respected by their peers and follow a consistent and transparent evidence-review process. The second major risk area is the actual participation and buy-in by the practicing oncologists. The Oncology Pathways process must add value to their day or, at a minimum, be unobtrusive. A well-constructed software application that requires minimal data entry and fits naturally within their workflow is essential. Lastly, the final risk is that payors are unable or unwilling to recognize the value of the Oncology Pathways program and pursue cost management strategies that limit access to care or create redundant overlays to existing processes.

**MCO:** What are the costs associated with an Oncology Pathways program?

**Dr Ellis:** The largest outlay on our part was the intellectual property that went into developing Oncology Pathways. With the input of 100 medical oncologists going into the various Oncology Pathways, you can’t really put a price tag on the program. In addition to the intellectual property, there have been significant information technology (IT) costs associated with the implementation of the Oncology Pathways. When we started the program, it was paper-based, and it took 2 years to develop the Web-based system. These IT costs are ongoing, and we’re planning on unveiling Version 3.0 of the program with added features to make it more user-friendly. Although we never really added up the total cost of implementation and development, we can be fairly certain it’s paid for itself.

**MCO:** Can you outline the results of the program in terms of cost savings? How has the program fared in terms of provider compliance?

**Dr Ellis:** We believe strongly that we are seeing a return on our investment both in terms of quality and cost, but these can be difficult to measure. In order to quantify the savings, you must look at the total cost of care. It’s not a given that you’re going to be saving money in terms of expenditures on the chemotherapy side but may, in fact, save money on hospitalizations. Beyond reducing drug costs by eliminating treatment variation and inappropriate use, the standardization of care should lead to less toxicity and fewer adverse events. We’re seeing this already with the rate of hospitalization of Oncology Pathways patients being lower than that of non-Pathways patients. This should, in turn, reduce the total cost of care, and our experience shows that it has.

We have collaborated on a cost-savings study with Highmark and have demonstrated a reduction in the total cost of care for them. In March of 2005, we conducted a study to analyze the cost savings realized by the standardized dosing and use of Avastin® resulting from Oncology Pathways implementation. The results showed a savings of over $1 million for Highmark in just 6 months for Avastin® use alone.

The acceptance of Oncology Pathways by providers has been encouraging as well. Adoption is much easier when the oncologists see the big picture goals of the Oncology Pathways program and, almost as importantly, when we make it easy for them to use and beneficial in their daily routine. Although we have no way of quantifying the level of treatment variability before implementation of the program, it’s documented that 88% of physicians are currently compliant with the Oncology Pathways process. We believe this is a significant improvement over the past and, even more, vastly different from what occurs daily in most non-UPMC oncology practices across the country.