He entered the stage with a shirt reading “Sequence Me”. The other panelists were dressed in business attire, as was the moderator. This was the third day of the Precision Medicine Leaders Summit (PMLS) and he definitely intrigued me. The session about to start was titled “The Healing Power of the Narrative”. As he sat down, I quickly looked at my agenda and discovered that he was Bryce Olson, Global Marketing Director, Health and Life Sciences Group at Intel. He was also a patient, with an amazing story.

In the Spring of 2014, Bryce was diagnosed with stage 4 metastatic prostate cancer. Being nearly 20 years younger than the typical patient with prostate cancer, and having one of the most aggressive forms that the Oregon Health & Science University had ever seen, he was determined to beat the disease. It quickly became apparent as he told his story that his passion and determination knew no boundaries.

He mentioned his pathologist as being a crucial advocate early in his journey. It was his pathologist that answered his plea to sequence his cancer, where it had only fallen upon deaf ears previously, thus explaining his shirt. Being a pathologist myself, I immediately took notice and quietly cheered inside for the recognition of my specialty. Equally important, the audience heard his ringing endorsement.

The tumor sequence revealed his cancer had a PI3K pathway mutation along with a PTEN copy number loss. In simple terms, as Bryce put it, his cancer had “the accelerator floored and brake lines cut”, a double whammy.

After he spoke I asked a follow up question about how he connected with his pathologist. I told him about my own department’s program of offering patients the opportunity to meet their pathologist, ask questions about the report and view their tumor under the microscope. He could not contain his enthusiasm for finding another pathologist ally.

I was delighted to find another engaged patient.

The role of pathologists has changed over the years as health care moves from a volume to value based care model. Pathologists are more and more proving value by collaborating with the care team to develop high quality, cost-conscious, accountable algorithms for disease workup. As Bryce demonstrates, both patient and pathologist can be champions for the effective practice of precision medicine. The pathologist’s diagnosis can help guide treatment options that save both time and money by allowing for a personalized approach, thereby avoiding treatments that won’t be as effective and waste time.

Another important message that Bryce’s case illustrates is that pathologists need to be more patient facing. We have typically been the quiet member of the care team, working behind the scenes. Many patients do not even know of the contributions we make to their care, let alone that we are doctors. Care is better when pathologists are a member of the team.

Precision medicine means that each patient has an individual treatment plan developed for them based upon the unique characteristics of their disease. As a pathologist, I know that all treatment begins with a diagnosis. Each patient’s journey begins under our microscope. It is only natural that pathologists are crucial members of the care team.

I was fortunate to have been able to participate in the PMLS, serving on a panel of pathologists where we delved into some of the pressing issues facing pathologists in this era of precision medicine. “Tissue is Still the Issue – A Paradigm Shift in Biopsy Philosophy” examined the following topics:

- With the advances being made in liquid biopsies and the growing concept of tissue-agnostic tests, will patients need solid tissue biopsies?
- Will organ based disease ontologies persist?
- What role will circulating tumor cells play?
- What role will digital imaging play in precision medicine?
- What role will artificial intelligence and machine learning play?
- Given the potential for computational algorithms to analyze tissue images, will we still need a pathologist?
- How do we address the added cost of the tissue diagnostics necessary to be able to practice precision medicine?
- How do we manage utilization and the cost of additional testing?
- Can we afford the financial burden of precision medicine?
- What is the role of the pathologist as a gatekeeper?
- How will pre-analytical factors be accounted for?
'As Bryce demonstrates, both patient and pathologist can be champions for the effective practice of Precision Medicine'
In upcoming issues, I hope to explore each of these topics and other issues that will inevitably come up as we all journey through precision medicine.

The era of precision medicine is truly upon us. With the recent FDA approval of immunotherapy for MSI-H tumors regardless of tumor type, genomic medicine has been firmly established as the standard of care. We no longer define cancer based on site of origin but rather the unique molecular signature driving that cancer. As Bryce said, he is not a prostate cancer patient, but a PI3K mutation metastatic prostate cancer patient. How can pathologists make sure they are up to date with advances in precision medicine? I offer some suggestions:

- Stay current with the leading pathology journals.
- Try following a great multidisciplinary journal like The Journal of Precision Medicine.
- Look for CME courses, especially those offered at annual meetings, e.g. CAP, USCAP, ASCP.
- Attend other specialty conferences, e.g. ASCO, ASH, SABCS.
- Attend next year’s Precision Medicine Leaders Summit.
- Engage with the care team.
- Advocate for your patients and tell their stories.

Precision medicine is personalized medicine. In a call to action for all my pathologist colleagues, let’s use the opportunity to personalize our work and get to know our patients. Bryce recaps it nicely, “If you treat us uniquely, you will engage us deeply”.

Dr. Misialek currently serves as Associate Chair of Pathology at Newton-Wellesley Hospital, Newton, MA. He is the Medical Director of the Vernon Cancer Center, Chemistry Laboratory and Point of Care Testing. He regularly instructs medical students and pathology residents. Dr. Misialek is a strong advocate for pathology and is very active in the College of American Pathologists.