Recently, I was fortunate enough to watch Michael Silver, PhD, in action. Dr. Silver is Vice President of a consulting company called Sg2–Health Care Intelligence in Evanston, Illinois. I have the privilege of seeing many capable speakers during the course of a year as I visit hospitals and health systems across the country. Dr. Silver stands out in my mind.

This particular presentation was entitled “The Healthcare Technology Challenge: Strategic Tools, Strategic Decisions.” In his talk, Dr. Silver reviewed dozens of new trends in health care delivery that have been heavily influenced by the rapid evolution of technology. He focused particularly on technology in the information sector, in radiology, and in invasive procedures. I think that some aspects of his presentation are clearly relevant for our readers. I would like to list several examples.

Of course, our readers know that the cost of technology is soaring, but Dr. Silver had a way of putting all of this into context. He divided the evolution of technology among traditional, contemporary, and the so-called “next round.”

For instance, a cardiac balloon catheter in the traditional catheterization laboratory costs $500; a stent raises the bar to nearly $1,000; and a drug-eluting stent is priced at $2,400. A scalpel costs $20, an electrocautery machine $12,000, and a harmonic scalpel $30,000. Clearly, institutions will be making more strategic resource allocation decisions very soon. I feel certain that his classification system is powerful and effective.

Dr. Silver further emphasized the role of genomics in medical practice for the near future. He described both the “nonmolecular” and the “molecular” worlds of therapy. In the current nonmolecular world, a patient might complain of weight loss, blood in the stool, and a lack of energy. A contemporary diagnostic workup would show the presence of a stage 3 colon cancer with an overall poor prognosis. In the molecular world, noninvasive genomic testing would demonstrate that an asymptomatic, middle-aged patient is at high risk for the future development of colon cancer. A robust diagnostic evaluation, coupled with futuristic imaging tools, identifies a stage 1 colon cancer with an extremely good prognosis. In other words, molecular medicine might enable us to treat the presymptomatic patient and allow for overall, more effective interventions.

Another excellent case in point that Dr. Silver described—“disruptive technology”—turns current practice on its head and may radically alter our world view. Specifically, he noted a soon-to-be-released high-speed, 64-slice computed tomography (CT) scanner. What is the significance of 64 slices? At that rate, patients can hold their breath for five seconds, and we can produce a three-dimensional (3D) picture of the heart and lungs.

Picture this: A patient comes to the emergency room with crushing substernal chest pain. The super-new, 64-slice CT scanner can produce a high-quality, color 3D image of the patient’s heart, pinpointing the ischemic section of muscle with precision. Even people with severe chest pain can probably hold their breath for just five seconds. Clearly, this advance would be a disruptive technology.

Finally, Dr. Silver discussed the long-range impact of some of these examples on the credentialing process in our hospitals. Who will be allowed to perform robotic surgery or 64-slice CT scanning and practice molecular medicine? What would we do with an $8,000 bio-degradable stent that might be on the market in three short years? How would we pay for the implementation of a multi-million dollar, completely robotic operating room?

Readers of P&T have tackled similar questions regarding the technological imperative of future practice. I thought that Dr. Silver brought these issues into a very clear focus, and I was stimulated by his delivery style and by the overall quality of his graphics. His slides were of the highest quality, with video clips and animation. It is difficult to do justice to them in print.

Who is tracking these trends for your P&T committee? How will you grapple with the strategic tools and the accompanying strategic decisions that we will all have to make?

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As usual, I am interested in your views. You can contact me at my e-mail address, david.nash@jefferson.edu.

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