Choosing Wisely [1] is a campaign by medicine’s specialty societies to identify and reduce the use of ineffective tests and procedures by physicians. A study by Rustin et al. [2] demonstrated that in women in remission after initial chemotherapy for ovarian cancer CA-125 surveillance was ineffective – their median survival did not improve. In fact, monitoring was harmful to the extent that chemotherapy, with its immediate, deleterious effects on patients was initiated sooner – women managed by CA-125 surveillance had five fewer months of chemotherapy-free “remission.” This study provided evidenced-based medicine that CA-125 surveillance was ineffective.

Esselen et al. [3] in last week’s JAMA Oncology on-line examined the impact of Rustin’s evidence-based recommendation on physician behavior. Using the National Comprehensive Cancer Network database on ovarian cancer, drawn from six large academic medical centers, they looked at the use of CA-125 testing before and after the publication of Rustin’s study. There findings:

- “there was no change in the use of CA-125 tests or computed tomographic scans.”
- “the study by Rustin et al. did not change practice at 6 NCCN academic centers despite widespread discussion.”
- There was “an estimated mean population cost for one year of ovarian cancer surveillance testing of $16,194,647.”

A simultaneous commentary by James Goodwin [4] asks “why was there no change in practice in response to good evidence?” He suggests several reasons:

- That Ruskin’s study was characterized as early versus delayed treatment not as routine surveillance – thus the results confused physicians. But as he notes elsewhere “the six centers studied by Esselen et al. were leading academic medical centers, populated by clinicians who also sit on the committees that write the guidelines.”
- That it’s hard to tell physicians they are wrong or harmful in their behavior. Physicians typically respond that they are the exception – they do it differently, their patients are different, or even, times have changed.
- That medical economics, while not irrelevant, “muddies the issue.” This is an argument about
physician’s primary duty to their patient's well-being, not to society. “It is difficult enough helping patients decide on what is best for them without introducing the concept of what is best for society.”

And while all of these contentions are true, I believe that another of Goodwin's arguments drives all of the physicians' behavior:

- Medical practitioners practice and patients live in “a sea of uncertainty.” That the stress of not knowing drives us “to seek more information through testing” to increase our certainty. But more information was not necessarily helpful. The discomfort with uncertainty extends to our patients – “While physicians may be challenged dealing with uncertainty, many of our patients refuse absolutely to tolerate it.”

The drive to reduce risk especially in a life or death situation is greater than economic issues or evidence-based medicine. The behavior physicians demonstrated in Esselen's paper is the territory of Tversky and Kahneman’s Nobel prize winning Prospect theory – how we make judgments when uncertain. We might do better at improving medical care and reducing unnecessary testing to look to their work and the field of behavioral economics they founded rather than to simply continue Choosing Wisely.

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