Adjuvant! Online Tool for Decisions on Value of Post-Operative Chemo

There’s a website called Adjuvant! Online, developed by oncologist Peter Ravdin, that is best known for its use after surgery for breast cancer in assessing the value of post-operative chemo. Because I don’t really treat breast cancer, I haven’t spent time on the website, but I do know that it’s a valued resource among practicing oncologists who care for patients with breast cancer. So when member NeilB gave me a heads up that there is also information now on the website that can help to estimate the value of adjuvant chemo for lung cancer, I knew it was worth checking out. I should mention, though, that the website is designed to be used by medical professionals and not directly by patients, with an intent to use the information to shape the discussion between physician or another health care provider and the patient. Still, just as I didn’t know about this tool until Neil mentioned the potential value of this website for lung cancer, other physicians could use it now based on a tip off by a patient who is interested in the analysis.

The predictions are based on some data on estimated survival based on patient age, sex, and overall health, combined with data on the T stage (based on tumor size and local areas also involved with the tumor) and nodal stage, as well as the grade of the tumor (from well-differentiated to poorly differentiated, or potentially not specified). It makes a presumption about the survival advantage of platinum-based chemo after surgery, which the program estimates at a 20% relative improvement. The actual numbers on the trial are a little lower, but the support documentation about the program indicates that several of these studies used potentially inferior regimens and that 20% is an estimate based on modern cisplatin-based chemo. Importantly, it also applies to patients who have a single identifiable primary cancer, who have had surgery to stage it pathologically, who haven’t had any pre-operative treatment or any other chemo before this evaluation, and who are healthy enough to have been included on the trials. That’s not everybody, and it can’t be presumed that the program results would apply more broadly.

So you enter the variables I mention above, and based on large datasets of outcomes, it produce a set of predictions about the likelihood of

1) being cured based on surgery alone
2) being cured by chemo when they would have otherwise recurred
3) dying of recurrent cancer in the next five years, or
4) dying of causes unrelated to the cancer.

The calculator looks like this:
There’s also a feature that allows users to print a user-friendly report for patients that summarizes anticipated results for 100 such patients who either do or don’t receive post-operative chemo. Here’s the report for the 68 year-old woman with minor medical problems and a stage IIB NSCLC:
Finally, there are several figures that can be printed out to enable better discussions with patients, including diagrams of the chest organs, staging explanations, and visual explanations of the purpose of chemotherapy after surgery. A couple of examples are shown below:

**Adjuvant! Online for Resected NSCLC: Example of Staging Figures**

**Stage 2 (localized positive nodes)**

Primary Tumor: Localized. Either entirely within lung or: A. Involves main bronchus (but still at least 2 centimeters from the carina), or B. invades to surface of lung, or C. has caused atelectasis of part but not entire lung.

Spread to nodes: Local spread:
To ipsilateral hilar nodes; or intrapulmonary nodes.

No Metastatic Disease

Image shows an example of a Stage 2 tumor (T1-T2, N1, M0)
The website makes the appropriate cautionary comments that the calculations are general and that they aren't a substitute for good clinical judgment. Overall, I was very impressed by the educational tools available from Adjuvant! Online, at least for this situation. It would be great to have tools like this available for other lung cancer settings as well.

In the meantime, thanks to Neil for highlighting this one for me. In my future trials to other oncologists, I’ll try to publicize that this site has lung cancer information and isn’t just a breast cancer website, and I’d encourage patients to also mention it to their doctors as a potential central focus for discussing the anticipated value of adjuvant chemo for resected NSCLC.