Long-Term Results with SBRT

As I described in my last post, stereotactic body radiotherapy (SBRT) is a technique of treating lesions in the lung with a high dose of radiotherapy. Usually the treatment is administered in 3-5 fractions. Several institutions have reported very good results using this technique.

Recently, some centers have started reporting the long term follow up of these patients. As an example, Usematsu and colleagues from Japan reported at this year’s ASTRO that 131 patients with biopsy proven stage I NSCLC were treated with SBRT using between 5-10 fractions. Only 5 of the 131 patients demonstrated local progression. The 5 and 10 year overall survival rate was 54% and 48%., with a 5 and 10 year cancer-specific survival rate was 78% of 74%, respectively. Remember, the significant difference between the overall survival and cancer-specific survival in this setting is because many patients treated with SBRT are medically inoperable because of competing medical problems. Illustrating this factor, the 5 and 10 year overall survival rate of medically operable patients (who had refused surgery) was 72% and 65%, respectively.

This experience demonstrates that this technique is very effective, including not just control over a couple of years but even long-term control for early stage NSCLC. It is associated with minimal toxicity and has held up as offering very good local control, certainly a strong consideration for medically inoperable patients and a reasonable alternative for patients who are surgical candidates but are not inclined to pursue it.

Over the next several years, we’ll be seeing many more series that clarify the long-term effectiveness of SBRT.