

### ***Competition or Cooperation?***

One of our local institutions, the Mayo Clinic Arizona, was mentioned in a recent op-ed in the New York Times. The editorial entitled, “It Costs More, but Is It Worth More?” by Ezekiel J. Emanuel and Steven D. Pearson (1), criticizes the Mayo Clinic in Rochester and Arizona for building two new proton beam treatment facilities at a cost of more than \$180 million dollars each. It accuses the Mayo Clinic of participating in “...a medical arms race for proton beam machines, which could cost taxpayers billions of dollars for a treatment that, in many cases, appears to be no better than cheaper alternatives”. The editorial states that except for a handful of rare pediatric cancers, the evidence is lacking for treatment of other types of cancer such as lung, esophageal, breast, head and neck, and prostate cancers.

John Noseworthy MD, President and Chief Executive of the Mayo Clinic, replied that the Mayo Clinic “will carefully study proton therapy and other new therapies, compare clinical outcomes and offer high-quality, cost-effective, proven and safer treatments for patients”. In another letter to the Minneapolis StarTribune, Nosewothy goes on to say, “Mayo Clinic takes serious issue with the authors' use of Mayo Clinic and its programs in this manner. As a not-for-profit institution, we are motivated by the best interests of our patients, not ‘profit’ or competitiveness. With the facility costs, start-up expenses and the extensive training required to offer this therapy, we do not expect to break even, much less earn a ‘profit,’ on our proton therapy program for years”.

I am not an expert in either cancer treatment or proton beam therapy, but a weekend search of the medical literature largely confirms that the therapy is unproven for most cancers, although there was no evidence that proton beam is inferior to more traditional means of delivering radiation therapy. Second, the cost of proton beam therapy is high. Costs are about \$55,000 plus \$15,000 in physician fees per patient for the therapy alone, twice as much as a linear accelerator. This sounds like a lot of money but you still need an estimated volume of about 2,000-3,500 patients per year to cover an investment of over \$180 million investment.

So why are the Mayo Clinic and others constructing these centers since they are expensive; mostly of unproven superiority over existing therapies; and reimbursement, although generous, may not cover the cost of the facility? The answer is likely competition. Competition for patients largely drives tertiary referral centers. Locally, there is a small war going on between the Mayo Clinic Arizona and the new Banner MD Anderson Cancer Center. Mayo Clinic is concerned about MD Anderson having greater name recognition and losing its patients to the new center. Banner in partnership with MD Anderson sees an opportunity to compete in a large metropolitan center without a strong university medical center. Mayo Clinic Arizona undoubtedly feels that new technologies

such as proton beam are necessary to compete with MD Anderson, especially since MD Anderson has a proton beam therapy unit in Houston.

All this is probably not good for patients and illustrates that competition in medicine does not necessarily lead to cheaper, more effective care. Patients will be easily persuaded to receive the latest and greatest therapy when their life is on the line, especially when the bulk of the cost is covered by a third party. Whether proton beam therapy is the latest and greatest is fairly difficult to determine at this time, given the absence of well designed, randomized studies. The Center for Medicare and Medicaid Services (CMS) process of determining reimbursement costs is largely a mystery but needs to show some restraint. Large reimbursements for unproven therapies such as proton beam while underfunding areas with well demonstrated benefits is not in the best public interest. Furthermore, instead of directly or indirectly encouraging competition, CMS needs to foster cooperation. Perhaps requiring hospitals to work together to study the effectiveness of proton beam to get reimbursed would be a good first step. As Franklin D. Roosevelt said, "Competition has been shown to be useful up to a certain point and no further, but cooperation, which is the thing we must strive for today, begins where competition leaves off" (5).

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### **References**

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2. Noseworthy J. Mayo clinic's investment. New York Times. <http://www.nytimes.com/2012/01/06/opinion/mayo-clinics-investment.html> (accessed 1-23-12).
3. Nosewothy J. Mayo CEO defends use of proton beam therapy. Minneapolis StarTribune <http://www.startribune.com/opinion/otherviews/136758278.html> (accessed 1-23-12).
4. Clark C. What would super committee say about \$430m proton beam center war? <http://www.healthleadersmedia.com/page-1/QUA-272912/What-Would-Super-Committee-Say-About-430M-Proton-Beam-Center-War> (accessed 1-23-12).
5. [http://www.brainyquote.com/quotes/authors/f/franklin\\_d\\_roosevelt.html](http://www.brainyquote.com/quotes/authors/f/franklin_d_roosevelt.html) (accessed 1-23-12).