



## Mayo Clinic Proton Beam Therapy Program *Arizona Campus*

**BACKGROUND** Mayo Clinic is ushering in a new era of radiation treatment to its patients with the upcoming addition of two state-of-the-art proton beam therapy facilities.

Ground was broken on Sept. 15, 2011 for Mayo's first proton beam therapy building in downtown Rochester, Minn. Construction will begin on the second facility, which will be located on the Phoenix campus of Mayo Clinic, following the Dec. 13 groundbreaking.

The addition of the proton beam therapy program further expands Mayo Clinic Cancer Center's (MCCC) collaborative approach to patient care. Mayo Clinic Cancer Center is a National Cancer Institute (NCI)-designated comprehensive cancer center with a multi-site national presence. Its three campuses — in Phoenix/Scottsdale, Ariz.; Jacksonville, Fla.; and Rochester, Minn. — offer MCCC a broad geographic reach to serve diverse patient populations. Mayo Clinic's internationally-recognized physicians and scientists collaborate across the spectrum of cancer research — including basic, translational, clinical and population sciences — seeking to find ways to lessen the burden of cancer on society.

The Rochester facility is expected to open its doors in mid 2015, with the Arizona facility scheduled to follow in the spring of 2016. All eight treatment rooms of the Mayo Clinic Proton Beam Therapy Program are expected to be fully operational at both Mayo Clinic campuses by 2017.

**HOW THE TECHNOLOGY WORKS** Proton beam therapy is a highly targeted and precise way of administering radiation therapy. It allows delivery of higher doses of radiation to malignant and benign tumors, while simultaneously minimizing the dose and damage to surrounding healthy tissue and organs. The goal is to most precisely target protons to ensure they only treat tumors and spare healthy tissue and organs. These facilities will maximize the ability to cure more cancers and help people achieve longer, better lives.

Mayo Clinic's proton beam facilities will feature pencil beam scanning — another form of proton beam therapy. "Pencil beam scanning" proton beam therapy uses spot scanning, "painting" small groups of protons back and forth through a tumor.

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*The Arizona facility is expected to open the spring of 2016.*



- 137,000 cancer patients per year could benefit from proton beam therapy. Currently, U.S. proton beam facilities have capacity for 11,000 patients per year
- Between the facilities in Arizona and Rochester, Mayo Clinic will treat an additional 2,400 eligible patients per year
- Children, young adults and healthy older patients with tumors located next to sensitive critical organs will be given the highest priority
- All eight treatment rooms in Mayo Clinic's facilities will use pencil beam scanning exclusively
- Each treatment room will be outfitted with a 180° gantry and robotic treatment couches
- Mayo Clinic will be the first to operate pencil beam scanning facilities in the Midwest and the Southwest

#### ECONOMIC IMPACT

- Overall, Mayo Clinic is investing \$370 million in the Proton Beam Therapy Program from its capital budget and donor support
- In Arizona, Mayo is investing \$181.5 million
- Philanthropist Richard O. Jacobson donated \$100 million to the total program; the proton beam building in Rochester will be named for him
- The Proton Beam Therapy Program in Arizona is expected to employ about 130 staff members, including 10 physicians and 12 Ph.D. physicists
- The Proton Beam Therapy Program in Rochester is expected to employ about 130 staff members, including 9 physicians and 10 Ph.D. physicists
- Each facility will create approximately 500 construction-related jobs

For additional information on Mayo Clinic's proton beam therapy program, please visit: <http://www.mayoclinic.org/proton-beam-therapy/facilities.html>



*Mayo Clinic will be the first to offer pencil beam scanning in the Southwest.*