Race renews to bring proton therapy to area

Posted: 12:05 a.m. Saturday, Sept. 7, 2013

http://www.mydaytondailynews.com/news/news/race-renews-to-bring-proton-therapy-to-area/nZppR/

By Lawrence Budd and Chelsey Levingston - Staff Writer

The race to bring proton therapy to the Cincinnati-Dayton area escalated this week and renewed questions about the area's ability to sustain more than one proton cancer treatment center.

The battle to bring the costly treatment here comes at a time when some insurers are dropping their coverage of certain proton beam treatments, saying less expensive radiation treatments are just as effective.

Two events Tuesday reignited the race to bring proton beam therapy and thousands of potential patients to the area.

Cincinnati Children's Hospital Medical Center announced plans to build a $118 million proton therapy center near the Ohio 129-Interstate 75 interchange in Liberty Twp. Cincinnati Children's will treat primarily pediatric cancers at the center, although it is in talks to lease space to Cincinnati hospital system UC Health for adult therapy.

Also on Tuesday, Miami Twp. trustees took more action to have California-based Optivus Proton Therapy Inc. build a proton center at the Austin Boulevard-Interstate 75 interchange in the township 20 miles north of Cincinnati Children's Liberty Campus. The trustees voted unanimously to spend $40,000 to retain Ross Sinclaire & Associates LLC to handle a bond sale for development of the proposed Optivus proton center, first announced in 2009.

Proton therapy is a type of radiation treatment that delivers more precise doses of radiation than conventional X-ray radiation treatments. Supporters view key benefits of proton to be that it administers radiation with less damage to healthy tissues. It is used to treat cancers of the brain, head, neck, eyes, prostate, lungs, early breast cancer and pediatric cancers.

"The benefit … is that when a proton penetrates the skin, it will travel a specified distance and then it'll just fizzle out," Dr. Ronald Hale, radiation oncologist for the independent practice Dayton Physicians Network, said.

The biggest hurdle facing development of proton centers is the cost, said Dr. Douglas Einstein, medical director and chair of radiation oncology for Kettering Health. There are only 11 proton therapy centers operating in the U.S.

"These are $100 million investments and it's tough in today's health care environment to install one easily. So people are looking at different ways to do that and we at Kettering are investigating different ways to do that," Einstein said.

"Arguably, Dayton probably doesn't need any proton center. It probably should be either in Cincinnati, Columbus or maybe on the I-71 corridor between the two" with greater access to more people, Hale said. "Not to mention putting two in a small community like Dayton is probably not the smartest utilization of health care resources."

Miami Twp.'s action to hire the investment firm Ross Sinclaire & Associates is the latest move related to the Optivus project.

In 2009, Optivus Proton and Miami Twp. announced plans to build a multi-million proton center at the Austin Landing development, on more than 30 acres of land in the southwest quadrant of the Austin Boulevard-Interstate 75 interchange.

Even though plans were put on hold, a company connected to Optivus still has options on the land.

An agreement giving Clivus Development LLC options on the township-owned land for the proton center has been extended three times. Most recently, Miami Twp. trustees voted July 29 to extend Clivus Development's options on the land to June 30, 2014. The agreement also commits the township to reimburse Clivus for up to $400,000 in market and feasibility studies.

- Proposed proton therapy centers move ahead
- Hospital announces $160M expansion in Liberty Twp.
- Health systems compete over cancer care market
- New proton therapy project for Cincinnati; Dayton plans stalled

Premier Health, Dayton Physicians Network, and Wright State University were at one point in talks to partner with Optivus on its project. Premier Health spokeswoman Diane Ewing said there's nothing new to report.

Cincinnati Children's spokesman Terry Loftus said their project is being financed by operating cash, anticipated future cash flows and philanthropy.

"We are moving forward with this project because of the significant benefits this therapy provides to children who need radiation therapy to treat their cancers and lymphomas," Loftus said in a statement.

- Cincinnati Children's buys back land in Butler County
- Project expected to be big sourc eof new jobs put on hold

- Two groups now planning proton therapy centers

Using proton treatment over other forms of radiation therapy is believed to dramatically reduce the risk of later complications experienced by survivors of pediatric and young adult cancers decades after treatment is completed, Loftus said.

A third proposal made by Kettering Health Network in 2010 to also offer proton therapy has not shown visible progress. Kettering Health was considering building a comprehensive cancer center on the campus of its flagship hospital Kettering Medical Center on Southern Boulevard, and putting proton and other technologies there.

Kettering Health officials say there are still plans to build a comprehensive cancer center, although no timetable has been given.

Yet insurance companies have started limiting coverage of proton treatments.

Aetna Inc. on Aug. 1 dropped coverage of proton beam therapy for prostate cancer, saying "proton beam therapy for metastatic prostate cancer is considered experimental and investigational." Aetna, which has 700,000 Ohio members, still considers proton medically necessary for malignancies in children.

Anthem Blue Cross and Blue Shield in Ohio, with 3.6 million members statewide, covers proton therapy for certain cancers involving the brain and spinal cord, as well as localized prostate cancer, Anthem in Ohio's Medical Director Dr. Barry Malinowski, said in an email.

"Our coverage of proton beam radiation is based off of evidence-based medicine meaning we look for treatments that have proven outcomes, proven value," Malinowski said.

UnitedHealthcare, with 1.7 million Ohio members, covers proton radiation "in cases where, according to clinical evidence published in peer-reviewed medical literature, it is proven effective or to have a beneficial effect on the diagnosis or treatment of a specified condition," spokesman Kevin Shermach said in an email.

Kettering and Premier Health have in recent years invested in alternative technologies to build their cancer-fighting arsenals — advanced linear accelerators.

Kettering Health said Tuesday it has purchased and installed its newest linear accelerator, the Elekta brand Versa HD. The cost was not disclosed. Doctors demonstrated the machine Wednesday at Kettering Medical Center.

"The treatment times using this accelerator are about four to five-fold quicker for patients, which means when a patient is laying down in possibly slightly an uncomfortable position, they don't have to do it for that long of a period of time," Dr. Einstein said.

Partners Premier Health and Dayton Physicians in July opened their sixth outpatient cancer center in Darke County. Each cancer center is equipped with a linear accelerator, the most advanced of which is housed at Miami Valley Hospital South in Centerville.

Miami Valley South opened in January this year a $20 million comprehensive cancer center. It boasts the Varian brand TrueBeam STX linear accelerator.

Dr. Hale said TrueBeam and Versa HD are comparable pieces of equipment and the most advanced cancer fighting technologies in Dayton.

Linear accelerators generate X-ray radiation to treat a region of the body. TrueBeam and Versa are new-versions that adapt regular linear accelerator machines to also do stereotactic radiosurgery, a high precision radiation treatment.

“There’s no reason to go get protons … when we have technologies as good as Versa HD here,” Dr. Louis Keiler III, a Kettering Health radiation oncologist, said.

Keiler’s opinion does not represent those of the health network, a spokeswoman said.

Radiation cancer treatments available locally

Radiation: Ionizing radiation is essentially light energy at a high enough frequency to split water molecules apart. X-rays, gamma rays, and other particles can do that including protons

When water molecules break apart, DNA gets damaged. When DNA gets damaged, tumor cells are damaged in a way they’re unable to reproduce. As a side effect, normal tissue is also damaged and needs to repair, which the human body is good at doing

Radiation is used for inoperable tumors

The question then is what form of radiation do we use and how do we get it there?

Conventional linear accelerator: Treats a broad area with radiation covering the tumor, regional lymph nodes and the area suspicious for having disease around the main tumor

Form of atomic radiation — generates X-rays (photons), essentially high frequency light energy

Radiation treatment can last 40 minutes

Radiosurgery: High precision, high dose radiation aimed directly at tumor

Advanced linear accelerators: Newer version machines that adapt a regular linear accelerator to do radiosurgery

Doctors can use the advanced linear accelerator to apply a field of radiation or to do radiosurgery and apply radiation to a precise target

The added benefit of these new linear accelerators is a linear accelerator adapted to radiosurgery can treat any spot in the body

Two brands of these machines locally available — Elekta's Versa HD (Kettering Health Network) and Varian's TrueBeam STX (Premier Health/Dayton Physicians)

Actual radiation times typically less than 10 minutes

Proton therapy (not yet available): Form of atomic radiation that generates a charged particle called a proton using a cyclotron

Proton beam travels a specified distance, deposits its energy and stops

Gamma knife: Approximately 200 sources of radioactive cobalt arranged in a way to all point at the same point in space

If cobalt sources are coalesced on a tumor, it delivers a high dose of radiation

Older technology

Used to treat head cancers only, with few exceptions

No actual surgery or cutting involved

Form of nuclear radiation

CyberKnife: A linear accelerator mounted on the end of a robotic arm

One treatment session can last two to three hours

Only used for radiosurgery, but can be used in any part of the body

SOURCE: Dr. Ronald Hale, radiation oncologist, Dayton Physicians Network