

*“I’m a veteran and I don’t back down. When I learned that ProCure targets just the tumor in my lung, I knew it was unique—and I knew it was the treatment for me. I’m so glad I went with proton therapy.”*

*—ProCure patient, lung cancer*

# ProCure



## **Proton therapy for precise, proven treatment in non-small cell lung cancer (NSCLC)**

Lung cancer is common, and 85% to 90% of lung cancer patients have non-small cell lung cancer (NSCLC).<sup>1</sup> Fortunately, innovative treatments are being developed, offering new hope for patients and their families.

Proton therapy is a revolutionary type of treatment for lung cancer, especially in stage II and III NSCLC. Proton therapy is very precise and predominantly targets the tumor site. This means that proton therapy can deliver **more** radiation to the tumor, but is **less** likely to damage surrounding organs and tissue than conventional radiation therapy. And, it is just as effective as conventional radiation.<sup>2</sup>

You can feel confident that proton therapy is an effective treatment—it has been used at Massachusetts General Hospital and Loma Linda University Medical Center for more than 20 years with excellent results.<sup>3,4</sup>

Of course, learning everything you can about your treatment options is very important. We invite you to visit [ProCure.com](http://ProCure.com) or call a ProCure center to learn more about how proton therapy may be able to help you fight your lung cancer.

**Maximize treatment dose while minimizing risk of side effects**



## Proton therapy: Precise radiation therapy, lower risk of side effects

### What is proton therapy?

Proton therapy is an advanced form of radiation therapy that is very precise in treating cancer. This means the tumor can get treated with higher doses of radiation but with lower risk of damage to the surrounding healthy tissue.<sup>2</sup>

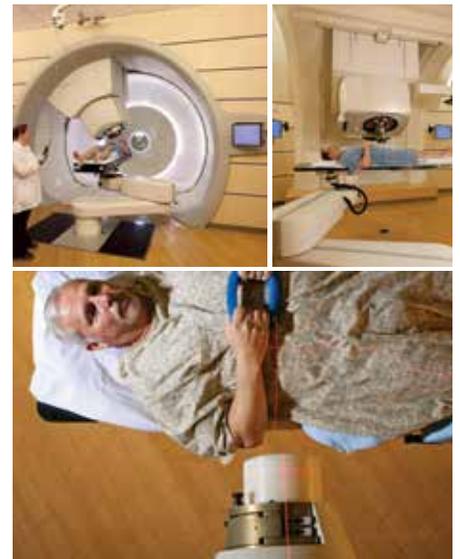
In stage III non-small cell lung cancer, proton therapy offers less unnecessary radiation to the heart, lung and esophagus

### What are the advantages of proton therapy vs other kinds of radiation in stage II and III NSCLC?

Recent studies suggest that proton therapy is just as effective as other forms of radiation—3-dimensional radiation (3D-CRT) and intensity modulated radiation therapy (IMRT)—in patients with NSCLC, but with less risk of side effects such as pneumonitis and esophagitis (inflammation of the lungs and esophagus).<sup>5,6</sup>

### What can you expect with proton therapy at ProCure?

- Proton therapy is given in a state-of-the-art center with specialized medical equipment
- Treatment and care are given by a team of specialized doctors, nurses and healthcare professionals
- The time spent delivering proton therapy to the tumor is only about a minute or two, but the entire treatment session will take about 30 minutes
- Personalized treatment for each individual patient reduces the amount of radiation to the heart, healthy lung and esophagus



### Other treatments for stage III NSCLC—many of which can be used along with proton therapy—can include<sup>1</sup>:

- Surgery that helps remove the tumor
- Chemotherapy

Our medical team will discuss different treatment options with you to help you make a decision. Do not hesitate to ask your doctor for more information to help you understand them.

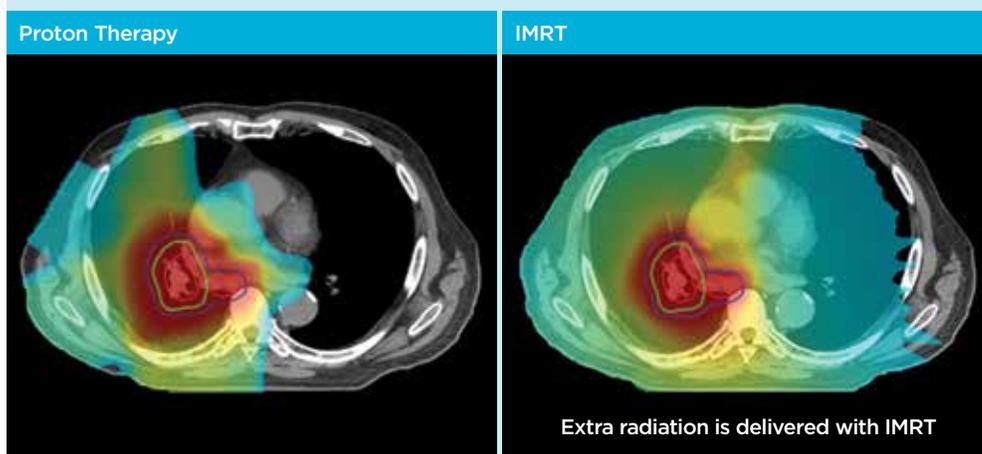
## Proton therapy targets the tumor more precisely than other forms of radiation therapy... to spare healthy tissue

Proton therapy can deliver a higher dose of radiation to the tumor with less radiation to the heart and healthy lung tissue compared to standard radiation, 3D-CRT and IMRT.<sup>2</sup>

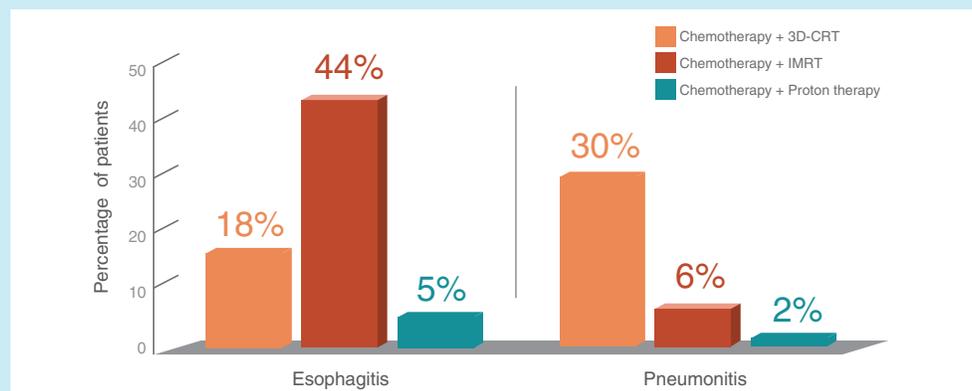
### Proton therapy reduces the radiation dose to healthy lung tissue, the heart and other structures—good news for you and your family

In a study by The University of Texas MD Anderson Cancer Center of patients with inoperable NSCLC, proton therapy reduced dose to normal lungs, esophagus, spinal cord and heart by a significant amount compared with other forms of radiotherapy<sup>5,6</sup>

In a study with stage III NSCLC patients, proton therapy is estimated to eliminate 45% of radiation to the healthy lung when compared to IMRT



Percentage of patients experiencing greater than grade 3 lung and esophagus inflammation after proton and photon therapy<sup>6</sup>



Precise treatment can mean more comfort for you.

Patients treated with proton therapy had lower rates of exposure to the lung or esophagus than patients treated with standard radiotherapies, **even though they had received a higher dose of radiation<sup>2</sup>**

*"I found the whole process to be pleasant. The ProCure team was always smiling and very thorough in their explanations."*

-ProCure patient, lung cancer

# Proton therapy is the solution for many patients with stage II and III NSCLC

## How do I know if proton therapy will work for me?

Many patients with stage II or stage III NSCLC are good candidates for proton therapy. If you would like to speak with a physician, we can work with you to schedule a consultation with a radiation oncologist at a ProCure center. During the consultation, the radiation oncologist will discuss different treatment options with you and determine if you will benefit from proton therapy. The radiation oncologists at ProCure use many forms of radiation to treat lung cancer, so they will provide you an educated treatment recommendation that is best for you.

## How many proton treatments will I receive?

Treatments are usually given 5 days a week for 3 to 7 weeks, depending on the stage of your cancer and other health factors.

## Can proton therapy be used along with other kinds of cancer treatment?

Yes. Proton therapy can be used as a follow-up to surgery or chemotherapy.

## Is proton therapy covered by my insurance?

Proton therapy is covered by Medicare and many private insurance providers. Each ProCure center has a financial counselor who is dedicated to guiding you through the insurance process. Please contact us if you have questions about coverage.



*"I felt so reassured that proton treatment was just as effective as traditional radiation, but he didn't have to suffer the side effects of other kinds of radiation therapy. And, the people at ProCure were wonderful—we look forward to every 'reunion' at our ProCure center."*

—Spouse of ProCure patient, lung cancer

### REMEMBER

## Proton therapy may be a good choice for your stage II and III NSCLC if you have:

- A tumor near critical structures or vital organs
- A need for simultaneous chemotherapy
- Prior radiation therapy
- Limited pulmonary function

**Visit [ProCure.com](http://ProCure.com)—or a ProCure center—to learn more.**

**References:** 1. American Cancer Society. Lung Cancer (Non-Small Cell). Updated April 30, 2014. <http://www.cancer.org/acs/groups/cid/documents/webcontent/003115-pdf.pdf>. Accessed May 7, 2014. 2. Chang JY, Zhang X, Wang X, et al. Significant reduction of normal tissue dose by proton radiotherapy compared with three-dimensional conformal or intensity-modulated radiation therapy in stage I or stage III non-small-cell lung cancer. *Int J Radiat Oncol Biol Phys.* 2006;65(4):1087-1096. 3. Trofimov A, Nguyen PL, Coen JJ, et al. Radiotherapy treatment of early stage prostate cancer with IMRT and protons: a treatment planning comparison. *Int J Radiat Oncol Biol Phys.* 2007;69(2):444-453. 4. Slater JD. Clinical applications of proton radiation treatment at Loma Linda University: review of fifteen-year experience. *Technol Cancer Res Treat.* 2006;5(2):81-89. 5. Chang JY, Komaki R, Lu C, et al. Phase 2 study of high-dose proton therapy with concurrent chemotherapy for unresectable stage III nonsmall cell lung cancer. *Cancer.* 2011;117(20):4707-4713. 6. Sejpal S, Komaki R, Tsao A, et al. Early findings on toxicity of proton beam therapy with concurrent chemotherapy for nonsmall cell lung cancer. *Cancer.* 2011;117(13):3004-3013.