## DEEP INSPIRATION BREATH HOLD (DIBH) HELPS MAKE SURE YOUR HEART IS SAFE

As part of your treatment for breast cancer, you may receive radiation treatment to the left breast.

One potential concern is the impact of the radiation on your heart since it may be exposed to radiation during your treatment.

#### **Radiation Treatment Plans**



Images courtesy of Jason Matney PhD

One way to reduce or eliminate radiation damage is to use a technique called Inspiration Breath Hold or commonly known as Deep Inspiration Breath Hold (DIBH).

When you take a deep breath, the heart moves away from the breast, creating more space between the two.

The DIBH approach can help protect your heart during your radiation treatment.

# alignrt

NYOH New York Oncology Hematology

## A NEW STANDARD OF RADIATION TREATMENT

AlignRT<sup>®</sup> is the premier SGRT (Surface Guided Radiation Therapy) technology.

AlignRT<sup>®</sup> helps set up and monitor patients during radiation treatment with sub-millimeter accuracy and without permanent tattoos.

15 out of 15 top US News & World Report "Best 50 Hospitals for Cancer" use AlignRT®.

#### REQUEST ALIGNRT - A PRECISION, TATTOO AND MARK FREE TREATMENT TODAY.

New York Oncology Hematolgy Clifton Park Cancer Center newyorkoncology.com

(518) 831-4448



## BREAST CANCER RADIATION THERAPY

Avoiding tattoos while protecting your heart from radiation damage

## ALIGNRT<sup>®</sup> MAKES SURE YOUR HEART IS IN THE RIGHT PLACE

AlignRT<sup>®</sup> is a precision positioning and monitoring technology that:

- Ensures you are in the desired position for your treatment
- Tracks your skin's surface in real time using 3D cameras
- Positions you with sub-millimeter accuracy
- Makes sure you are breathing in just the right amount of air during treatment
- Helps protect your organs and healthy tissue



#### **Peace of Mind**

If you lose your breath or move out of the desired position during the treatment, AlignRT® will automatically pause the radiation beam or alert your therapist immediately to help reposition you.

## A TATTOO AND MARK FREE TREATMENT APPROACH

Align  $RT^{\ensuremath{\mathbb{B}}}$  can eliminate the need for radiation tattoos or skin marks for certain patients.

#### The Traditional Approach

- Drawing marks on a patient's skin, or marking dots with a permanent tattoo, has been a common step in the process of radiation therapy.
- Historically, marks and tattoos allowed your radiation team to know exactly where to treat each day. On average, patients receive three to four marks.

#### A New Approach Using Virtual Tattoos

AlignRT<sup>®</sup> projects a light on your skin, actlng like thousands of virtual tattoos. These images are fed into a software program that monitors your positioning with sub-millimeter accuracy and ensures you are treated in the correct position.

### PROVEN TO BE AS EFFECTIVE AS TATTOOS<sup>3</sup>

AlignRT<sup>®</sup> has been shown in several studies to be at least as accurate as either marks or tattoos for positioning patients prior to radiation therapy.

## PATIENT PREFERRED, TATTOO & MARK FREE TREATMENT<sup>4</sup>

78% of patients prefer a tattooless option

**45 miles** was the distance patients were willing to drive for this option.

AlignRT<sup>®</sup> uses safe patterned light and proprietary imaging technology to monitor patient movement with sub-millimeter accuracy.



### PROVEN SAFE REDUCES HEART DAMAGE

A recent study<sup>1</sup> showed that AlignRT<sup>®</sup> + DIBH effectively prevented radiation-induced abnormalities in blood flow to the heart. Of the breast cancer patients treated, 0% showed these abnormalities after 6 months.

This compares to a previous study without AlignRT® or DIBH, where 27% of patients showed new abnormalities in blood flow to the heart 6 months after radiation therapy<sup>2</sup>.

#### HEART BLOOD FLOW ABNORMALITIES

0



<sup>1</sup> Zagar et al. Utility of Deep inspiration breath-hold for left sided breast radiation therapy in preventing early cardiac perfusion defects – A Prospective Study. Int J Radiat Oncol Biol Phys. 2017

 $^2$  Marks et al. The incidence and functional consequences of RT-associated cardiac perfusion defects. Int J Radiat Oncol Biol Phys. 2005 Sep 1;63(1):214-23

<sup>3</sup> Shah AP, et al. Clinical evaluation of interfractional variations for whole breast radiotherapy using 3-dimensional surface imaging. Pract Radiat Oncol 2013;3 (1):16-25.

<sup>4</sup> The Breast Journal. Radiotherapy tattoos: Women's skin as a carrier of personal memory—What do we cause by tattooing our patients? September 24, 2019 online publication. Accessed November 12, 2019 at https://onlinelibrary.wiley.com/doi/epdf/10.1111/tbj.13591