

Published on *UCSF Department of Radiation Oncology* (<https://radonc.ucsf.edu>)

Home > Patient Care > Types of Treatment > SDX Breath Monitoring System

---

## SDX Breath Monitoring System



At UCSF, we aim to effectively treat your cancer with the smallest chance of side effects. One way we do this is by making sure your tumor moves as little as possible during treatment. We use the SDX system to treat your tumor while you hold your breath. This targets your tumor in the most accurate way, especially if your tumor is in the chest or abdomen, where your organs move around the most. This is an extra way we will protect your nearby internal organs.

The system includes a mouth piece, nose clip, and a pair of video glasses. Through the glasses, you will see a line move up and down as air goes in and out of your body. As you breathe in, the line goes up. As you breathe out, the line goes down.

We may ask you to hold your breath after you breathe in or after you breathe out. This depends on the location of the tumor.

In general:

- Liver and pancreas: breathe out and hold.
- Lung: breathe in and hold.

Your trainer will give you exact directions to follow. You can practice using the equipment

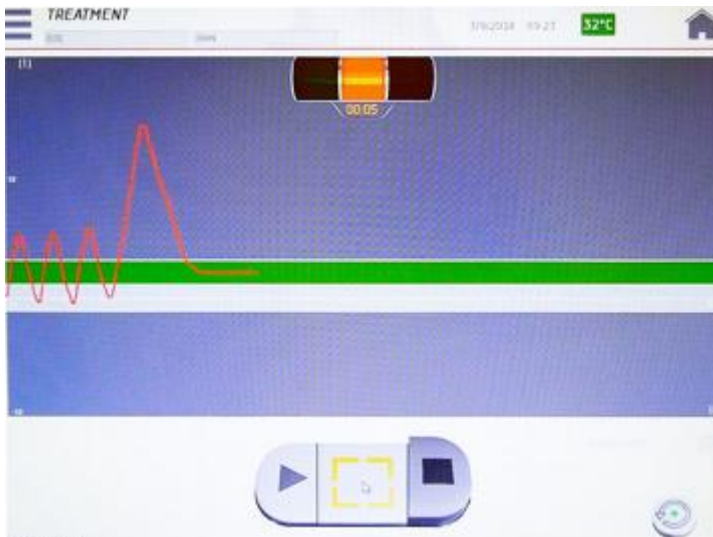
during your simulation appointment. We will also see how long you can comfortably hold your breath.

During treatment you will hold your breath for about 30 seconds at a time. The radiation turns on when you hold your breath in the right place. When you breathe again the radiation beam turns off.

## **This video is a brief introduction to the SDX System:**

### **Example of treatment:**

Below is what you may see in your video glasses. Start at the left of the screen and move to the right. You breathe in and out 3 times, and the red line goes up and down with your breaths. When the green traffic light at the top of the screen turns on, you take a deep breath. The red line goes up very high. Then you breathe out and the red line goes down. You hold your breath in the green band for treatment.



The number of breath holds for treatment will depend on how much radiation you receive and how long you can hold your breath. It is usually about 15-20 times during 45 minutes.

---

### **Practice:**

If your doctor has recommended SDX breath hold for your treatments, you can practice along with these short videos:

---

### **Contact us:**

Please contact Sean or Brandi in the Department of Radiation Oncology for any questions: 415-514-3581.

\*/

UCSF Main Site

© 2015 The Regents of the University of California

---

**Source URL:** <https://radonc.ucsf.edu/sdx-breath-monitoring-system>