

New research advances Leo Cancer Care's mission to deliver radiotherapy treatment in the upright position

The study evaluated upright positioning, immobilization accuracy, setup time and comfort in patients undergoing radiotherapy with pelvic and abdominal tumors.

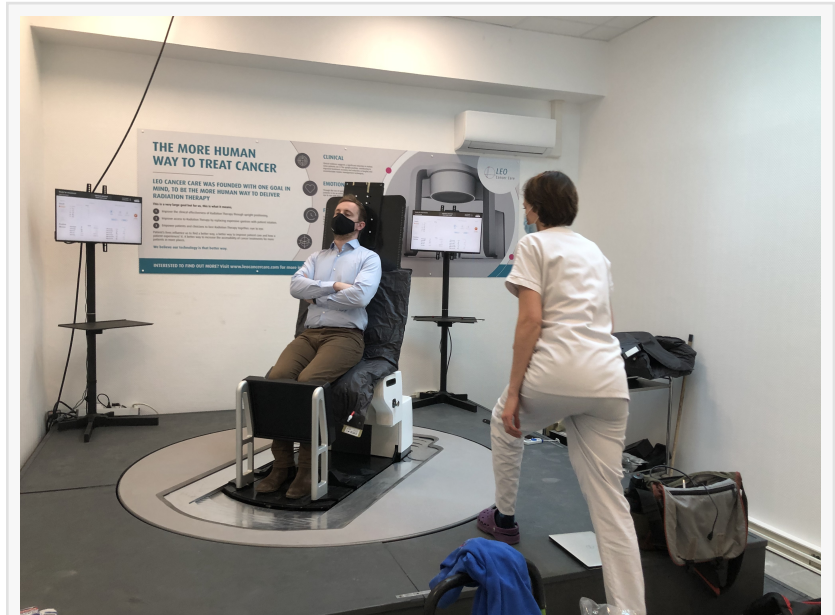
HORLEY, SURREY, ENGLAND, December 19, 2022 /EINPresswire.com/ -- [Leo Cancer Care](https://www.leocancer.com/), developers of an upright positioning solution for the delivery of Radiation Therapy, has unveiled significant findings from a study which underlines how its unique upright positioning system is spearheading a new direction for the treatment of cancer patients.

The first study on pelvic cancer patients positioned in an upright position has been conducted at the [Centre Léon Bérard](https://www.centre-leonberard.com/) in Lyon, France – a comprehensive cancer centre that is dedicated solely to cancer care, research and education.

Leo Cancer Care's upright patient positioning system was installed at Centre Léon Bérard for a series of patient trials to determine how delivery of vital cancer treatment in the upright position, as opposed to the traditional method of laying supine (flat/horizontal on a bench), might improve patient experience, clinical effectiveness, and access to radiotherapy.

This groundbreaking new technology forms part of Leo Cancer Care's mission is to make the delivery of Radiation Therapy 'more human' and according to patients who took part in the study, is a significant improvement on the traditional supine approach.

The aim of the study was to evaluate upright positioning and immobilization accuracy based on optical images, the setup time and comfort in patients with urological, gynaecological, and lower gastro-intestinal tumors undergoing radiation therapy. Upright positioning may affect organ volume, positioning and movement to supine/prone positioning and the study sought to provide



Sophie Boisbouvier, Radiation Therapist at Centre Léon Bérard working with the upright patient positioner from Leo Cancer Care



We seem to have an intra-fraction accuracy that is better than in supine, and the patient is also more comfortable.”

*Sophie Boisbouvier, Radiation
Therapist - Centre Léon
Bérard*

data on how it might have beneficial impacts.

THE KEY FINDINGS HIGHLIGHTED IN THE REPORT ARE:

1. The upright positioning system allowed an accurate repositioning within the three set-ups tested. On average, the positioning/repositioning was below one millimetre accuracy for patient setup in upright position for pelvic tumor site. (Inter-fraction positioning is the positioning seen with images taken on different treatment fractions/sessions)

2. The intra-fraction motion was within three millimetres for more than 90 percent of patients in a 20-minute time frame in the upright position for the pelvic tumor site. This was evaluated as acceptable and, in some cases, better than supine. (Intra-fraction motion is the variability seen in multiple images acquired during the treatment fraction/session).

3. The upright positioning is associated with reasonable positioning and repositioning setup times when one Radiation Therapist (RTT) was involved and much shorter when there were two; On average 14.4 minutes were required for the first positioning with one RTT and 5.0 minutes with two. Subsequent repositioning took on average 4.9 with one RTT and 2.9 minutes with two.

The patient’s subjective assessment of the upright positioning was at least as good and for some items even better than in the supine position.

Niek Schreuder, Chief Scientific Officer at Leo Cancer Care, said: “The findings reported here are complementary to the results from a recent study comparing male pelvic organ shapes and positions between the supine and upright positions.□ Considering these early promising factors, treating pelvic targets (male and female cancers) in the upright orientation might become the preferred method in the very near future.”

EVALUATING STABILITY AND COMFORT

A total of 16 patients (eight men/eight women) with prostate, bladder, rectal, endometrial, or cervix/uterine corpus tumors were included in this study which took place between October 2021 and June 2022. Their ages ranged between 35 and 81 years; heights ranging between 152 to 182 cm and patient weights were between 41 and 107 kg. The patients were all at various stages of their treatments including chemotherapy and radiotherapy.

The report recorded that the patients gave favourable responses in terms of comfort in the upright positioner and the ease of set-up. A total of 87% of patients felt all round comfortable or

very comfortable in the upright position compared to 73% for the supine position.

Thirteen patients (87%) felt stable or very stable in the upright position while 10 patients, (67%) said the same for the supine position. Meanwhile, 100% of patients found it comfortable or very comfortable to breathe in the upright position compared to 87% in the supine position.

In terms of setup, 87% of patients indicated that it was easy or very easy to be setup in the upright position – some naturally positioning themselves without adjustment from the Radiation Therapist, while 94% considered it to be easy or very easy to get out of the upright position.

Using the upright solution during these studies also required no use of skin marks (small tattoo dots used to align patients with the lasers during each session of treatment). The repeat setups were performed only using the immobilization devices and the upright positioner, including the coordinates of different parts of the positioning system.

The study was conducted by Sophie Boisbouvier, Radiation Therapist at the Centre Léon Bérard – Leo Cancer Care's partner organization.

Regarding the study findings and the future of how radiation therapy delivery might change Sophie Boisbouvier said: "I think the study has shown that we can treat the patients with pelvic cancers in an upright position.

"We do not need more time to do this than when the patient is in the lying (supine) position and we seem to have an intra-fraction accuracy that is better than in supine, and the patient is also more comfortable.

"I think we can hypothesize to improve the patient's experience of their treatment, but we can also imagine decreasing the side effects of radiation therapy with better repositioning and immobilization of the patient."

Stephen Towe, CEO of Leo Cancer Care, concluded: "This is a hugely important study for Leo Cancer Care but also for the field of Radiation Oncology. Up until this point, there have been a number of papers published on the potential clinical benefits of upright patient positioning. This is the first paper specifically discussing the benefits of the Leo technology so it is a powerful indication of our ability to live up to the hype."

*[Read the full paper](#) - 'Upright patient position for pelvic radiotherapy treatment'.

The Leo Cancer Care technology is not yet commercially available and will not treat patients until 510k or a CE mark has been achieved.

Fiona Redford
Leo Cancer Care

+44 7729 761667

fiona@leocancercare.com

Visit us on social media:

[Facebook](#)

[Twitter](#)

[LinkedIn](#)

[Other](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/607080131>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2022 Newsmatics Inc. All Right Reserved.