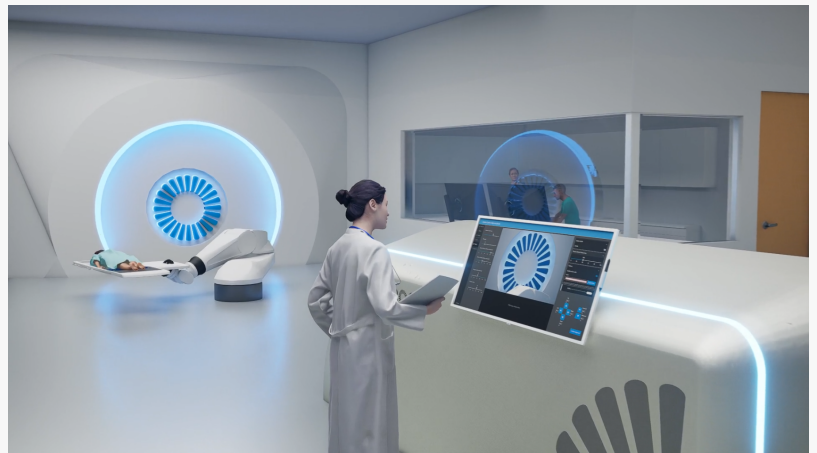


Lumitron Technologies, Inc. achieves breakthrough that fundamentally changes the way cancer can be detected and treated

Lumitron Technologies has created with its HyperVIEW™ image-guided, radiotherapy platform the world's first compact VHEE, FLASH-ready source.

IRVINE, CA, UNITED STATES, January 7, 2025 /EINPresswire.com/ -- The ultimate goal of modern radiotherapy is to effectively destroy cancer cells while preserving healthy tissue. FLASH bursts of very high-energy electrons (VHEE) have emerged as a promising and cost-effective approach to achieving this ambitious objective. [Lumitron](#) Technologies has created with its HyperVIEW™ image-guided, radiotherapy platform the world's first compact VHEE, FLASH-ready source.



Lumitron X-Ray HyperVIEW

Recent HyperVIEW demonstrations have produced VHEE beams of both sufficient energy to reach cancer anywhere in the human body and sufficient duration to be suitable for FLASH radiotherapy. In FLASH, cancer cells are attacked at a rate that is billions of times faster than possible from standard clinical radiation sources. Doing so has been shown in numerous scientific studies to reduce damage to healthy tissue while still effectively killing cancer cells. While the promise of FLASH is enormous, the reality is that only the largest (building-scale) and most expensive (>\$100M) radiotherapy machines in the world have so far been capable of performing FLASH radiotherapy anywhere in the human body. HyperVIEW's recent VHEE results show that similar capabilities could be produced from a machine

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With Lumitron's HyperVIEW, one might never remove a breast or prostate again.”

Dr. Phil Stricker, Clinical Director, Australian Prostate Cancer Research

roughly the size and cost of a modern MRI or CT.

It is important to note that HyperVIEW is also the world's highest-resolution, compact, mono-energetic, x-ray imaging system. Recent HyperVIEW studies have imaged biological objects at 100x higher resolution than possible using common medical x-ray tubes. This imaging capability is, by nature, perfectly aligned with HyperVIEW's electron beam. As a result, HyperVIEW offers the transformational opportunity for true, image-guided cancer treatment in which the disease is targeted with micron-scale precision using HyperVIEW's x-rays and then FLASH treated with its VHEE beam. In principle this could be accomplished in one sitting without the patient having to move.

"Lumitron's proprietary Distributed Charge Compton Source (DCCS) technology is the underlying scientific breakthrough that enables HyperVIEW's unique x-ray and electron beam capabilities," said Dr. Chris Barty, co-founder and Chief Technology Officer of Lumitron.

The details of Lumitron's DCCS technology were recently described in an invited, peer-reviewed article published in [Frontiers in Physics](#).

The impacts of this breakthrough can be profound.

"With Lumitron's HyperVIEW, one might never remove a breast or prostate again," said Dr. Phil Stricker, Clinical Director of the Australian Prostate Cancer Research Centre.

[Click here to see the animation.](#)

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