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**STAR Awards**  
2025

2025 TSIA STAR Awards  
Featured Application

## To bring hope to everyone dealing with cancer – ensuring excellence in care even during times of War

Ukraine's Innovative Training Approach Ensures Continued Excellence and Customer Success

### Introduction

Globally, the use of linear accelerators for treatment began in the 1950s. In Ukraine, prior to the full-scale invasion, half of the radiotherapy machines were using Cobalt-60. Upgrading these machines for centers that have not yet adopted advanced treatment techniques requires comprehensive training, both theoretical and practical. However, implementing such training during wartime presents significant challenges.

### The impact of the war on oncology patients

Since Russia's invasion of Ukraine, damage to key healthcare infrastructures, power outages, and shortages of medicine and food supplies have represented major hurdles for patients requiring time-critical interventions. Oncology services have been severely disrupted, and the war has begun to shift some of Ukraine's cancer burden to neighboring countries<sup>1</sup>. Delays in cancer diagnosis will increase cancer incidence and mortality in the long term.

### Addressing the urgent need for innovative and creative solutions

In 2024-2025, 15 cancer centers in Ukraine replaced their linacs. Ukraine has a pressing need for more staff with proficient training in modern therapeutic equipment for contemporary techniques. A novel strategic approach, Ukraine Personalized Project (UPP), customizes knowledge and skills development during wartime to meet clinical needs, safety and efficiency<sup>2</sup>.

In 2024, two public oncology centers in Ukraine, Precarpathian Clinical Oncology Center (PCOC) and Clinical Center for Oncology Cherkasy (CCOC), received their first linac, Elekta Harmony. Given the scarcity of resources and limited access to education during the invasion, a partnership with Help Ukraine Group (HUG) and Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) was established. Elekta provided free remote access to its Cloud-based training infrastructure. As a result, 12 radiation oncologists and 5 medical physicists from these two Ukrainian hospitals enrolled in the training program.

### Peer-to-Peer training with clinical experts around the world

Initially, Teams meetings, which included both tutorials and practical sessions, along with independent homework, were held weekly. Over time, these sessions increased to 2-3 meetings per week, each lasting 1-3 hours. The focus was on Dosimetry and Quality Assurance of contours and plans created via Monaco from both Ukrainian and Australian centers. To enable fully interactive sessions, Elekta Cloud-Based Training Infrastructure was made available to mentors and mentees of all roles so they can engage in real-life cases without compromising their clinical environment.

<sup>1</sup> Efpia – the impact of the war in Ukraine on oncology patients. Overview and recommendations for European and Ukrainian Health authorities and policymakers.

<sup>2</sup> Customised training during war: Ukraine takes new approach to develop knowledge and skills L. Mytsak<sup>1</sup>, S. Mykhailiuk<sup>2</sup>, S. Downes<sup>3</sup>, D. Stewart<sup>3</sup>, S. Turner<sup>4</sup>, P. Fortier<sup>5</sup>, N. Suchowerska<sup>4</sup> 1.Radiation oncology, Precarpathian Clinical Oncology Center, Ivano-Frankivsk, Ukraine 2.Radiation oncology, Clinical Center for Oncology, Cherkasy, Ukraine 3.Radiation oncology, Neline Comprehensive Cancer Centre, Sydney, Australia 4.University of Sydney, Australia 5.Global Learning Partnerships at Elekta, Montreal, Canada. ESTRO-2025-E25-1529.



Currently, two hospitals are independently contouring and planning in Monaco under supervision, meeting three times a week. They are adopting a problem-based approach to learning, which enhances their practical skills and knowledge. The clinicians from those two hospitals will also be engaging with the rest of the Ukrainian Radiation Oncology community to further expand knowledge.

## Conclusion

The Ukraine Personalized Project (UPP) has been a beacon of hope, ensuring cancer patients receive care within Ukraine, even during war. While Ukrainians fought for freedom, many families had to seek treatment abroad. The UPP aimed to provide the best care domestically, making the support revolutionary. Through virtual collaborations, Elekta provided essential training, enabling Ukrainian oncology centers to adopt advanced techniques. Positive feedback underscores the training's effectiveness, addressing immediate needs and laying the foundation for sustainable improvements. Elekta's commitment to excellence in clinical and technical training has been instrumental. The UPP exemplifies how strategic partnerships, and innovative solutions can overcome barriers and drive meaningful progress, even in challenging times. The UPP stands as a testament to the power of collaboration and its profound impact on cancer care.

Concrete results that other companies can implement:

- This project is part of a wider Education and Training program for Ukraine through which more than 500 clinicians will have access to clinical education (expansion).
- Investing in Education and Training leading to order growth (15 Linacs sold to Ukraine Minister of Health, additional Linacs ordered after successful implementation)<sup>3</sup>.
- Program is built in a standardized way so it can replicate in other regions of the world with challenging circumstances (e.g., War, Pandemics).
- On average, 8.2 score on the value of the training received (satisfaction).
- European Society of Radiation Oncology (ESTRO) 2025 this project got submitted and accepted as a poster presentation towards >7000 delegates to ESTRO congress<sup>4</sup>.

“This is not just virtual learning, it is an approach tailored to the needs of Ukrainian hospitals, beside that it is empathy, it is the feeling that we are not alone, we have professionals from all over the world who are walking this difficult path with us” - says Lesia Mytsak, Radiation Oncologist Ivano-Frankivsk Clinical Medical University Ukraine.

## Background on Elekta Care Learning Partnerships

We are committed to providing excellent clinical and technical training that improves patient care and makes customers' workflow more efficient. We have 50 clinical consultants, >30 clinical observation sites and >30 clinical practice courses, by the side of our customers, as partners for success.

<sup>3</sup> <https://ir.elekta.com/files/mfn/64d9b271-7d7b-4738-83f5-1ad1c305c171/ukraine-harmony-order-2023-en.pdf>

<sup>4</sup> Customised training during war: Ukraine takes new approach to develop knowledge and skills L. Mytsak<sup>1</sup>, S. Mykhailiuk<sup>2</sup>, S. Downes<sup>3</sup>, D. Stewart<sup>3</sup>, S. Turner<sup>4</sup>, P. Fortier<sup>5</sup>, N. Suchowerska<sup>4</sup> 1.Radiation oncology, Precarpathian Clinical Oncology Center, Ivano-Frankivsk, Ukraine 2.Radiation oncology, Clinical Center for Oncology, Cherkasy, Ukraine 3.Radiation oncology, Nelune Comprehensive Cancer Centre, Sydney, Australia 4.University of Sydney, Australia 5.Global Learning Partnerships at Elekta, Montreal, Canada. ESTRO-2025-E25-1529.



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