The main drawbacks are mentioned by a lower percent of participants:

- There are no institutional support and resources to make the analysis (71% of RO, 56% of MP and 33% of RTT).
- Time needed (86% of RO, 44% of MP and 50% of RTT).
- Very few indicate that it cannot detect the safety weak points (14% of RO), results are qualitative and subjective (17% of RTT) or that the risk analysis has not the depth needed (33% of MP).

The software used (SEVRRA) was considered as a tool easy to use that facilitates the analysis by 71% of RO, 89% of MP and 67% of RTT.

Conclusions: The risk matrix is a proven tool for risk analysis in radiotherapy. To implement a risk methodology among radiotherapy professionals it is very important that everyone in radiotherapy. To implement a risk methodology among radiotherapy professionals it is very important that everyone in radiotherapy. To implement a risk methodology among radiotherapy professionals it is very important that everyone in radiotherapy. The working group needs basic training before they can start it and assistance from risk analysis experts. Training a reduced number of radiotherapy centers, that can eventually act as reference centers at local level, is a feasible and effective way of spreading the use of these techniques at national level.

SP-0296
IAEA: Proactive and retrospective management with potential for benchmarking
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Introduction: Patient safety in radiotherapy is a comparatively new discipline that has rapidly risen to star status. This rise began in the late 1990s, with eye-opening reports documenting the scale of harm caused by medical errors. In 2010, the New York Times published a series of articles on medical errors elevating the awareness of accidents in radiotherapy. Safe radiotherapy requires a multi-disciplinary comprehensive approach to assure that an adequate safety system is in place. One aspect of a robust safety system is the identification of near misses and errors that occur in radiotherapy. The use of an incident learning system can capture data that can be used to identify weaknesses in safety and provide the institution with information in the use of effective safety barriers. Institutions can also look at the potential for harm and identify safety infrastructure needs using prospective risk analysis such as Failure Mode and Effects Analysis (FMEA). These types of analytical tools assist in understanding the adequacy of the safety system by addressing the potential for errors, the frequency of the errors and the severity of the errors. Both reporting and learning systems and prospective analysis have value in patient safety, but to elevate their effectiveness, the institution should consider looking at industry wide activities and results. Benchmarking can be used to compare one institution’s safety system and performance metrics to industry standards. The IAEA Safety in Radiation Oncology (SAFRON) Incident Learning system can provide both institutional data and global data on potential errors. The system is in the process of implementing a prospective risk analysis option that will allow the participant to address the likelihood of an event to happen at their institution based on initiating events, barriers and consequences.

Purpose/Objective: Provide information of the tools that are available to improve safety in radiotherapy, including:
- retrospective studies to include incident learning systems,
- prospective studies to identify potential for harm, and
- use of benchmarking to evaluate safety systems against institutional standards.

Material/methods: Lecture to include demonstration of the effectiveness in reducing radiotherapy incidents by evaluating past incidents, prospective risk analysis and benchmarking.

Results: Participants will have knowledge on the use of these safety tools that can be incorporated into the clinical environment and knowledge on how to evaluate their safety system.

Conclusion: A robust safety system in radiotherapy requires a multi-disciplinary comprehensive approach that includes evaluating events within the institution, evaluating the potential for harm and comparing these activities to institutional standards in radiotherapy. This can best be accomplished by participating in an incident learning system, conducting prospective risk analysis and benchmarking these results.

Joint Symposium: ESTRO-ESHO: Hyperthermia and combination with radiotherapy

SP-0297
Hyperthermia as an effective cancer treatment: rationale and achievements
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The first recorded use of heat to treat cancer was made some 5000 years ago, thus making it one of the oldest cancer therapies known. But, when using heat as a single agent therapy, tumour control is only likely when very high thermal ablation temperatures are achieved. At lower temperatures in the hyperthermia range (typically temperatures of up to around 43°C) tumour control is not possible. As a result, hyperthermia is often considered an experimental treatment with no realistic future in clinical cancer therapy. This is wrong. Although hyperthermia per se is probably only useful in palliative situations and has no role to play in the curative treatment of human tumours, there is definitive evidence that when hyperthermia is combined with more conventional therapies significant improvements in clinical outcome are possible. This is especially true for the combination of hyperthermia and radiation, and in fact, hyperthermia is probably one of the most effective radiation sensitizers known. In this presentation, we will review the pre-clinical studies establishing the rationale for how hyperthermia should be combined with conventional therapies and present an update of the clinical results demonstrating the clear benefit of such combination treatments in patients with specific types of cancer. In addition, we will discuss what approaches are now being applied to further improve the efficacy of hyperthermia when combined with more conventional therapies.