A Prospective International Survey on Ophthalmic Radiation Therapy Toxicity (SORTT)

Wolfgang A.G. Sauerwein¹, Paul T. Finger², Yuliya Gavrylyuk³, Brenda Gallie³,⁴ for the SORTT Study Group

¹University Duisburg-Essen, Essen, Germany
²The New York Eye Cancer Center, New York, USA
³Princess Margaret Cancer Center, Toronto, Canada
⁴University of Toronto , Toronto, Canada and the SORTT Study Centers

The challenge
Radiation plays an important role in the treatment of ophthalmic malignancies. Though many different radiation modalities (i.e., protons and brachytherapy) can be used to destroy ocular tumors, each varies in the irradiated volume. Therefore, we can expect a difference in the incidence and location of side effects as well as in functional outcomes. However, there are only strikingly few comparative studies or staging systems available to collect the incidence and impact of ophthalmic radiation. The existing Common Toxicity Criteria (CTC) is inadequate.

The SORTT diseases
- Uveal melanoma
- Conjunctival squamous carcinoma
- Conjunctival melanoma
- Ocular Adnexal Lymphoma

Where are we now?
- The database is open for patient registration
- 36 centers from have expressed interest to participate
- 5 of 36 centers have declined participation
- 8 centers have obtained ethics approval and have started entering data of standard treatments.
- On 1⁴ May 2019, 6 patients have been registered.
- 23 centers are working on meeting the requirements (local Ethics and DTA approvals) to start the trial.

Our expectations
The SORTT study of radiation side effects will show that all radiation modalities side effects are not equivalent. This will be extremely important for the future development of radiotherapy methods and techniques that are dedicated for specific clinical situations. The data may allow us to create an AI to help eye cancer specialists select the optimal radiation modality/methods modality for each individual case.

Efforts of the international ophthalmic oncology community
The 2015 Eye Cancer Working Day in Paris (WD1) demonstrated the difficulty in reporting radiation related eye toxicities due to a general lack of staging systems and data collection. Identified that multi-center, international registries could be used to gather the BIG DATA needed to create eye radiation side-effect staging systems. In 2017, at WD2 in Sydney we agreed to move forward with the a 5-year registry to collect structured information on toxicities after radiotherapy for eye cancers.

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Contact: w.sauerwein@uni-due.de
yuliya.gavrylyuk@uhn.ca

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