Translational Science in TARPSWG

Rebecca A. Gladdy, University of Toronto
TARPSWG Semi Annual Meeting, CTOS
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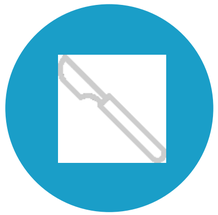
MISSION of TARPSWG

Evaluate current outcomes and evidence in the management of patients with primary, locally recurrent, and metastatic retroperitoneal sarcoma



Develop evidence-based expert consensus guidelines to standardize care of this complex and rare disease globally

Develop prospective clinical trials to address seminal clinical questions and enhance patient enrollment in prioritized clinical trials

Facilitate translational scientific research to advance fundamental knowledge and develop novel therapies

Translational Research Goals:

1. Develop important biologic questions, protocols approved by Translational Working Group
2. Participation in correlative scientific studies from clinical trials
3. Ongoing biobanking with clinical outcomes
4. Grant collaboration, engaging sarcoma research network

First working group meeting: September 24, 2020

PARTICIPANTS AND EXPERTISE IN TARPSWG TRANSLATIONAL SCIENCE GROUP

Rebecca Gladdy, University of Toronto – Functional genomics, drug therapy

Alessandro Gronchi, Instituto dei Tumori, Milan, IT – Biobanking, drug therapy

Paul Huang, The Institute of Cancer Research, London, UK – Proteomics, microenvironment

Emily Keung , MD Anderson Cancer Center, Houston, TX – Immunotherapy, epigenetics

John Mullinax, Moffitt Cancer Center, Tampa, FL – Adoptive Cell Therapy

Sandro Pasquali, Instituto dei Tumori, Milan, IT – Functional Genomics, LPS

Chan Raut, DFCI, Boston, MA – Biofilms, genomics

Jason Sicklick, UCSD, San Diego, CA – GISTologist and precision medicine

Winan Van Houdt, Netherlands Cancer Institute, Amsterdam, NK – Immune profiling, organoids

TARPSWG: Global Collaboration for Translational Science

1. Identify key biologic questions based on clinical observation

- Why do LMS patients have high rate of metastasis?
- Does GIST mutational status correlate with site?
- **How to we harness the immune response in sarcoma?**
- **What are the drivers of local recurrence in liposarcoma?**

2. Correlative science: evaluate responders vs. non-responders in clinical trials

- **Goal to understand non-responders vs. responders in STRASS2**

3. Biobank patient specimens linked with patient outcome data

4. Network with basic scientists, drug development, bioengineering etc. to secure funding and advance knowledge in this rare family of disease

STRASS2 Correlative Studies

STRASS2 translational research - Eva Wardelmann, Paul Huang, Christina Messiou

Sample collection in STRASS 2

- Tissue – Pre-treatment biopsies and surgical specimens (FFPE mandatory, frozen optional)
- Bloods – At multiple time-points, (EDTA-mandatory, STRECK-mandatory, SST-optional)
- Primary aim is to identify biomarkers for NACT response and resistance
    1. Evaluating molecular/immune characteristics relevant to response
    2. Correlation of pathology and imaging features
    3. Radiomics for prediction of treatment outcome

- Funding has been obtained via the Sarcoma Accelerator Award to fund multi-omic analysis of tissue (WES, RNASeq, proteomics) with planned integration with radiomics and computational pathology

Agenda for Translational Science Meeting – January 2021

1. STRASS 2: which opportunities do we have for translational research within this trial? Who is participating, how to leverage samples.

2. Brainstorm session:
   - ➤ Prioritize the most critical questions to be answered from a clinical perspective – what translational methods to use to address these problems?
   - ➤ How can we collaborate to address these questions by dividing the work and/or apply for grants together?

3. LPS samples and how to share this resource

4. Review proposals

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FEEDBACK?