TASK FORCE MESOTHELIOMA

University Hospital Zurich
Department of Thoracic Surgery
Raemistrasse 100, 8091 Zurich

isabelle.schmitt-opitz@usz.ch
www.en.thorax.usz.ch/research/clinical-research

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SUMMARY & MISSION STATEMENT

We employ experimental, preclinical, translational and clinical studies to test new treatment options and to explore tumor biomarkers for malignant pleural mesothelioma. We aim to identify new treatment strategies, biomarkers for early diagnosis and biomarkers predicting disease aggressiveness and treatment response that can be integrated into clinical practice.

OVERVIEW

Our main research goal is to improve the outcomes and treatment options for patients with malignant pleural mesothelioma (MPM), an incurable thoracic malignancy related to asbestos exposure. Towards this end, we currently apply intracavitarily cisplatin/fibrin after macroscopic complete resection in a phase II trial to prevent local tumor recurrence (NCT01644994). In parallel, we are evaluating the combination of intracavitary cisplatin/fibrin with post-operative radiotherapy in a preclinical animal model.
In addition, we are studying MPM biology and exploring novel targets for MPM treatment using *in vitro* cell models (cell lines, primary cells and spheroids) and pre-clinical animal models. Furthermore, various tumor biomarkers - that can be useful for the prediction of disease aggressiveness and response to treatment - are assessed in translational studies (protein expression, mutation profiles microRNAs). Apart from investigating these biomarker candidates in tumor tissue, current projects focus on the detection and identification of blood markers as a very attractive tool for non-invasive diagnosis, outcome prediction, or disease monitoring.

SELECTED CANCER RELATED PUBLICATIONS

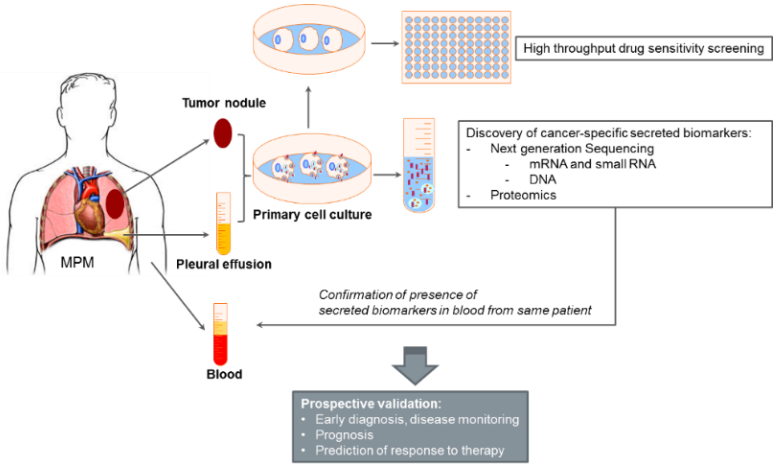
Low Merlin expression and high Survivin labeling index are indicators for poor prognosis in patients with malignant pleural mesothelioma. Meerang M, Bérard K, Friess M, Bitanihirwe BK, Soltermann A, Vrugt B, Felley-Bosco E, Bueno R, Richards WG, Seifert B, Stahel R, Weder W, Opitz I. **Mol Oncol.** 2016 Oct;10(8):1255-65

Antagonizing the Hedgehog Pathway with Vismodegib Impairs Malignant Pleural Mesothelioma Growth In Vivo by Affecting Stroma. Meerang M, Bérard K, Felley-Bosco E, Lauk O, Vrugt B, Boss A, Kenkel D, Broggini-Tenzer A, Stahel RA, Arni S, Weder W, Opitz I. **Mol Cancer Ther.** 2016 May;15(5):1095-105.

A new prognostic score supporting treatment allocation for multimodality therapy for malignant pleural mesothelioma- A review of 12 years' experience. Opitz I, Friess M, Kestenholz P, Schneiter D, Frauenfelder T, Nguyen-Kim DL, Seifert B, Hoda MA, Klepetko W, Stahel RA, Weder W. **J Thorac Oncol.** 2015 Nov;10(11):1634-41.

Extrapleural Pneumonectomy After Induction Chemotherapy: Perioperative Outcome in 251 Mesothelioma Patients From Three High-Volume Institutions. Lauk O, Hoda MA, de Perrot M, Friess M, Klikovits T, Klepetko W, Keshavjee S, Weder W, Opitz I**. Ann Thorac Surg.** 2014 Nov;98(5):1748-54.

Local recurrence model of malignant pleural mesothelioma for investigation of intrapleural treatment. Opitz I, Lardinois D, Arni S, Hillinger S, Vogt P, Odermatt B, Rousson V, Weder W. **Eur J Cardiothorac Surg.** 2007 May;31(5):773-8. Epub 2007 Mar 12.



In this part of our research, we explore novel blood-based diagnostic and prognostic biomarkers for MPM patients. We employ MPM primary cells in the first step to identify MPM specific secreted biomarkers. Biomarker candidates will be validated in a bigger patient cohort.