

## ABDOMINAL SURGICAL ONCOLOGY GROUP

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## SUMMARY & MISSION STATEMENT

We are interested in a better understanding and the development of novel concepts for the treatment of metastatic disease, particularly peritoneal metastasis.

## OVERVIEW

Our main research goal is to improve the outcomes and treatment options for patients with metastatic cancer.

In a collaboration with other European centres, we analysed prognostic factors and created a novel prognostic score (BIOSCOPE) for patients with colorectal peritoneal metastasis treated with HIPEC (hyperthermic intraperitoneal chemotherapy). Current clinical projects focus on clinical differences of peritoneal versus hematogenous metastasis, a better understanding of the pathophysiology of surgical techniques (HIPEC), and the introduction and characterisation of a novel concept of repetitive intracavitary treatment (PIPAC).

In our experimental projects, we explore mechanisms and develop novel strategies for the treatment of peritoneal metastasis with the help of *in vitro* and *in vivo* models for peritoneal metastasis and local intracavitary treatment.

## SELECTED CANCER-RELATED PUBLICATIONS

Systemic inflammatory response after hyperthermic intraperitoneal chemotherapy (HIPEC): The perfusion protocol matters! Roth L, Eshmuminov D, Laminger F, Koppitsch C, Schneider M, Graf TR, Gupta A, Kober F, Roka S, Gertsch P, [Lehmann K](#). **Eur J Surg Oncol**. 2019 Mar 29. pii: S0748-7983(19)30381-6.

Mutations of RAS/RAF Proto-oncogenes Impair Survival After Cytoreductive Surgery and HIPEC for Peritoneal Metastasis of Colorectal Origin. Schneider MA, Eden J, Pache B, Laminger F, Lopez-Lopez V, Steffen T, Hübner M, Kober F, Roka S, Campos PC, Roth L, Gupta A, Siebenhüner A, Kepenekian V, Passot G, Gertsch P, Glehen O, [Lehmann K](#). **Ann Surg**. 2018 Nov;268(5):845-853.

Major Postoperative Complications Are a Risk Factor for Impaired Survival after CRS/HIPEC. Schneider M, Eshmuminov D, [Lehmann K](#). **Ann Surg Oncol**. 2017 Aug;24(8):2224-2232.

Liver failure after extended hepatectomy in mice is mediated by a p21-dependent barrier to liver regeneration. [Lehmann K](#), Tschuor C, Rickenbacher A, Jang JH, Oberkofler CE, Tschopp O, Schultze SM, Raptis DA, Weber A, Graf R, Humar B, Clavien PA. **Gastroenterology**. 2012 Dec;143(6):1609-1619.

New insight into hyperthermic intraperitoneal chemotherapy: induction of oxidative stress dramatically enhanced tumor killing in in vitro and in vivo models. [Lehmann K](#), Rickenbacher A, Jang JH, Oberkofler CE, Vonlanthen R, von Boehmer L, Humar B, Graf R, Gertsch P, Clavien PA. **Ann Surg**. 2012 Nov;256(5):730-8.

