

Technology Offer

MACC1: Causal prognostic and predictive marker for cancer metastasis and recurrence risk stratification

Ref. No.: CH823 / CH100

Background

There are two major drawbacks for therapy of cancer patients: development of metastases or recurrent disease and emergence of resistance. To cope with these problems, strong prognostic and predictive biomarkers are needed, which enable early identification of cancer patients at high risk for metastasis, relapse/recurrence and which predict therapy response. Having such marker in hand will allow meaningful patient stratification for improved diagnosis, personalized therapies and clinical monitoring.

Technology

MACC1 (Metastasis Associated in Colon Cancer 1) was identified as prognostic and predictive biomarker for cancer progression and metastasis in early stage colorectal cancer (CRC) patients as well as in patients of more than 20 other solid tumor entities. In several retrospective and prospective cohort studies, the MACC1 mRNA expression levels in tumors from around 1000 CRC patients were analyzed by qRT-PCR. In addition, blood samples of more than 300 CRC patients were analyzed at MACC1 mRNA level and in around 650 CRC by immunohistochemistry. All these studies show that high MACC1 expression levels correlate with metastasis and a less favorable survival. Of note, the combination of the mismatch repair status (MMR) and MACC1 expression level improves the predictive performance / risk stratification of early colon cancer patients compared to use of MMR status as sole marker, and can therefore improve early therapy decisions. All this is strongly indicative for MACC1 as relevant, powerful biomarker.

Benefits

- ✓ Combination of MMR status and MACC1 expression improves risk stratification of response, recurrence and worse survival
- ✓ Allows earlier diagnosis of metastatic disease (even before metastasis is occult) and earlier therapy decisions for patients with solid tumors

Application

Risk stratification of cancer metastasis, recurrence, and worse survival

Commercial Opportunity

Searching for a licensing or developing partner

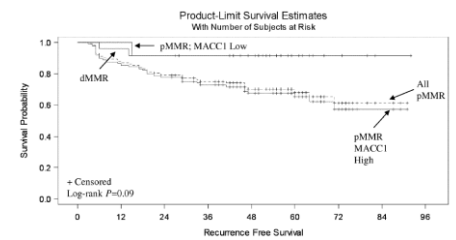


Fig. 1: Chemotherapy-naïve colon cancer patients stratified for MMR status and MACC1 mRNA expression

Key words

MACC1, colon cancer, metastasis, prognostic / predictive marker, risk stratification, recurrence, worse survival

Developmental Status

Patient data analysis

IP Status

Patent family I: granted patents in: GB, DE, FR, CH, US
([EP 1646649](#))

Patent family II:
PCT patent application (11/2017)
[WO2018/091419](#)
Pending patent applications: EP and US (11/2017)

Patent Owner

Patent family I:
Charité – Universitätsmedizin Berlin
Patent family II:
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