**Plasma S100P and hyaluronic acid (HA): markers for metastatic breast cancer (P-1157)**

**Keywords**
- Discrimination between metastatic and non-metastatic breast cancer ACU of ROC curve = 0.85
- More accurate prediction of progression-free and overall survival than presence of CTCs
- More accurate prediction of treatment response than presence of CTCs
- Marker for diagnostic, prognostic and treatment monitoring of metastatic breast cancer

**Abstract**
The present invention comprises the use of two serum/plasma markers for stage discrimination and prediction of survival as well as treatment response in breast cancer patients. Test statistics show that these markers perform better than established ones like the number of circulating tumor cells (CTCs).

**Development Stage**
Marker approved and verified in studies of 320 patients with different disease stages.

**The Technology**
Common ELISA technology has been used for detection of hyaluronic acid and S100P in plasma of breast cancer patients.

**Applications and Commercial Opportunity**
DKFZ is looking for a commercial partner to establish the test in a routine clinical setting.

**Inventors**
The investigators are: Burwinkel B., Yang R., Peng C., Schneeweiss A.

**Intellectual Property**
A European patent application has been filed April 16th in 2014 “New Biomarkers for metastatic breast cancer” with the number EP 1416486 5.9

**Further Information**
No other public information is currently available, but further information (speaking with the inventor) is available under a signed Confidential Disclosure Agreement (CDA).

**DKFZ Contact:**
Dr. Frieder Kern  
Deutsches Krebsforschungszentrum  
Technology Transfer Office T010  
Email: F.Kern@dkfz.de  
Tel.: +49-(0)6221-42-2952  
Fax: +49-(0)6221-42-2956

**Figure:**
ROC analysis of plasma HA and S100P level changes indicating treatment outcome of metastatic breast cancer patients.  
$AUC_{\Delta S100P/HA} = 0.82; AUC_{\Delta CTC} = 0.63$