**Supplemental Table 1. Overview of experimental studies on the value of circulating HGF levels as diagnostic or prognostic biomarkers in patients with different types of cancer (Studies performed before 2013).**

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| --- | --- | --- | --- | --- | --- | --- |
| **Tumor type** | **Number of samples tested** | **Sample type / method of detection** | **Diagnostic value** | **Prognostic value** | **Biomarker value** | **Reference** |
| Gastric cancer | 119 patients, 89 healthy control | Serum / ELISA | Serum HGF levels in patients with recurrent disease was significantly higher than in healthy subjects (P<0.001) and in primary cancer patients (P<0.003) | There was no significant correlation between HGF levels and distant metastases or lymphatic invasion | Diagnosis: Y  Prognosis: N | [[1](#_ENREF_1)] |
| Esophageal cancer | 149 patients | Serum / ELISA | HGF was significantly increased in patients compared to controls (P<0.001) | Patients with high serum HGF levels had poorer long-term survival compared to patients with HGF below the median value (P=0.01)  -Patients at stage III or IV had higher serum HGF levels compared to cases at stage I or II (p=0.04) | Diagnosis: Y  Prognosis: Y | [[2](#_ENREF_2)] |
| Pancreatic cancer | 118 patients | Plasma / ELISA | HGF level was elevated in periampullary cancer (PAC) patients (P<0.005) compared to benign pancreatic tumor (BPT), chronic pancreatitis (CP) patients, or healthy controls | HGF level was not associated with tumor stage and degree of differentiation | Diagnosis: Y  Prognosis: N | [[3](#_ENREF_3)] |
| Colorectal cancer | 184 patients  & 30 healthy  control | Serum / ELISA | HGF was significantly increased in patients compared to healthy individuals (P<0.05)  Serum levels of HGF correlated with tissue HGF expression levels (P=0.03) | -Increased serum HGF levels was significant prognostic factors for poor OS (P< 0.0001), especially in stage II or III patients (P< 0.0001)  -There was a correlation of higher HGF levels with tumor size (P=0.0001), lymph node invasion (P< 0.001), and distant metastasis (P< 0.0001) | Diagnosis: Y  Prognosis: Y | [[4](#_ENREF_4)] |
| Breast cancer | 44 patients & 15 healthy control | Serum / ELISA | -HGF was significantly increased in patients compared to controls (P=0.026)  -HGF levels were significantly elevated in patients with ER-negative compared to ER-positives patients (P=0.039) | Correlation between higher serum level of HGF and higher tumor stage (P=0.036) | Diagnosis: Y  Prognosis: Y | [[5](#_ENREF_5)] |
| Breast cancer | 124 patients, & 35 healthy control | Serum / ELISA | Serum HGF levels significantly increased in patients with invasive breast cancer compared to healthy subjects (P<0.001). | There was a correlation between high serum HGF levels and tumor size, negative estrogen receptor (P=0.035), poorly differentiated tumor (P<0.001), more advanced tumor staging (P<0.001), lymph node status (P < 0.001), distant metastases (P<0.001) and more advanced TNM staging (P<0.001) | Diagnosis: Y  Prognosis: Y | [[6](#_ENREF_6)] |
| Breast cancer | 134 patients | Serum / ELISA | -Patients with liver metastases had higher HGF levels compared to those with other sites of metastases (P<0.01)  -Serum HGF levels increased in 82.9% of patients with recurrent breast cancer | -The HGF level elevated in cases with metastatic nodes and high-grade intratumoral venous invasion (P<0.05)  -Increased HGF level was associated with relapse after primary excision of the tumor | Diagnosis: Y  Prognosis: Y | [[7](#_ENREF_7)] |
| Renal cell carcinoma | 45 patients, 45  health control | Serum / ELISA | HGF was significantly increased in patients compared to healthy controls (P<0.001) | -High serum HGF was significantly associated with worse survival (P<0.001)  -Increased HGF level was correlated with clinical stage (P<0.001) and tumor grade (P<0.001) | Diagnosis: Y  Prognosis: Y | [[8](#_ENREF_8)] |
| Head and neck squamous cell carcinoma | 498  patient | Serum / ELISA | - | Pretreatment HGF levels were prognostic for OS (P=0.008) and FFS (P=0.011) in the whole population | Diagnosis: -  Prognosis: Y | [[9](#_ENREF_9)] |
| Head and neck squamous cell carcinoma | 86 patients, 71  healthy  control | Serum / ELISA | -HGF was significantly increased in patients compared to healthy controls (P=0.017)  -Elevated serum HGF in recurrent patients was significantly different from HGF levels in healthy controls and in patients with primary HNSCC (P<0.05) | Tumor stage progression was significantly related to increased HGF level (P=0.003) | Diagnosis: Y  Prognosis: Y | [[10](#_ENREF_10)] |
| Ovarian cancer | 123 patients | Serum / ELISA | Patients with OC had significantly higher preoperative HGF serum levels than patients with benign ovarian tumors (P=0.001), and borderline (P=0.02) tumors | Higher HGF levels in advanced-stage patients compared to early stage (P=0.05)  No significant association between serum HGF with histological type, lymph node metastasis, or grade of differentiation  Elevated levels of serum HGF was shown shorter OS (P=0.052) and DFS (P=0.037) | Diagnosis: Y  Prognosis: YN | [[11](#_ENREF_11)] |
| Prostate cancer | 286 patients | Serum / ELISA | HGF level significantly higher in patients compared with control (P<0.0001) | Higher HGF level correlated with seminal vesicle (P=0.007) and lymph node invasion (P < 0.0001)  Preoperative plasma HGF level predicted disease recurrence (RR 1.07, 95% CI 1.0-1.15, P=0.05). | Diagnosis: Y  Prognosis: N | [[12](#_ENREF_12)] |
| Prostate cancer | 198 patients | Serum / ELISA | HGF level significantly higher in cancer patients compared to benign prostatic disease (P=0.0001) | High serum HGF associated with more advanced stage (P<0.0001) and poorly differentiated tumors (P=0.013) | Diagnosis: Y  Prognosis: Y | [[13](#_ENREF_13)] |
| Leukemia | 54 patients, 18 healthy control | Serum / ELISA | HGF levels were higher in the patients with CML, AML, ALL than in the healthy individuals (P<0.0001) | Higher HGF serum level were associated with CR (complete remission) (P=0.015) and correlated with poorer LFS (the leukemia-free survival) in patients with AML (1-year LFS rates = 75.0% vs. 37.5%, P=0.065) | Diagnosis: Y  Prognosis: Y | [[14](#_ENREF_14)] |
| leukemia | 101 patients, 11 healthy control | Plasma / ELISA | HGF levels were significantly higher in newly diagnosed AML patients than in normal subjects (P=0.0001) | High plasma HGF levels correlated with worse survival in AML patients (P=0.001) | Diagnosis: Y  Prognosis: Y | [[15](#_ENREF_15)] |
| Multiple myeloma | 234 patients | Serum  /ELISA | - | A trend of higher levels of HGF in more advanced stages was reported (P < 0. 0001) | Diagnosis: -  Prognosis: Y | [[16](#_ENREF_16)] |

Diagnostic value: Comparison of HGF levels between cancer patients and healthy individuals, or between different stages of the disease; Prognostic value: Association of HGF levels with prognosis in cancer patients:

Abbreviations: CI: confidence interval; CR: complete response; DFS: disease free survival; OS: overall survival

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