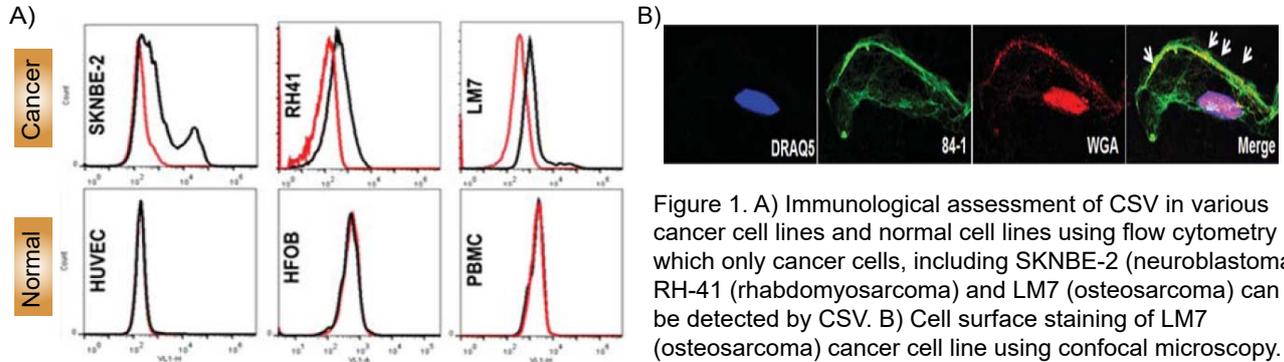


## Cell-Surface Vimentin (CSV) Antibody Capture of Circulating Tumor Cells in Sarcoma Patients

Not only emerging as an universal marker for circulating tumor cells (CTCs) undergoing epithelial-mesenchymal transition (EMT), cell-surface vimentin (CSV) has also been identified as an exclusive marker on sarcoma CTCs. By exploiting CSV monoclonal antibody, clone 84-1, as a primary prognostic tool, detection, enumeration and isolation of CTCs from different types of sarcoma has become achievable to monitor cancer metastasis and relapse.



### Isolation, Enumeration and Characterization

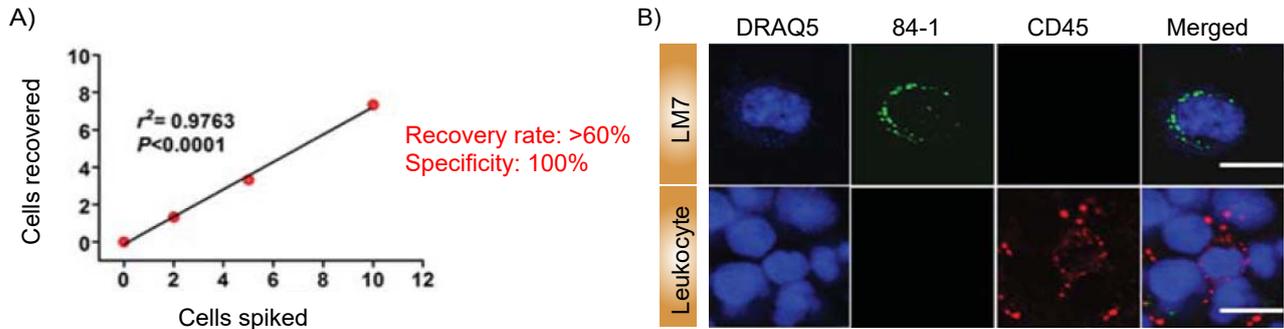


Figure 2. A) Regression analysis of capture efficiency for different cell numbers of LM7 spiked into human blood. The recovery rate is more than 60% where as the specificity is 100%. B) The isolation of leukocytes and LM7 cancer cells from blood were co-stained against DRAQ5, CSV(84-1) and CD45.

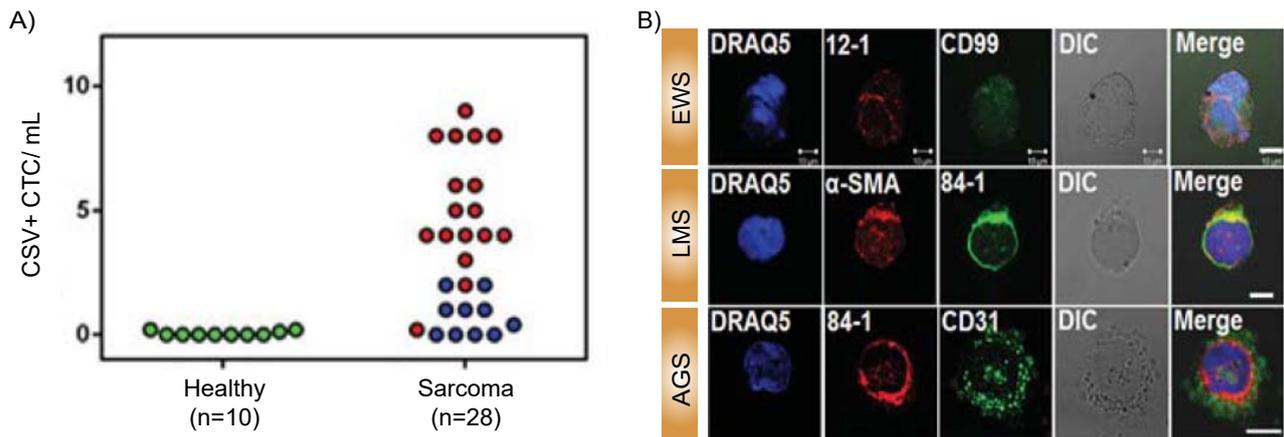


Figure 3. A) Enumeration of CSV+ CTCs from healthy and sarcoma cancer patient blood samples. B) Validation of CSV+ CD45- CTC isolated from Ewing sarcoma (EWS), leiomyosarcoma (LMS) and angiosarcoma (AGS) by staining against CD99,  $\alpha$ -SMA and CD31, respectively.

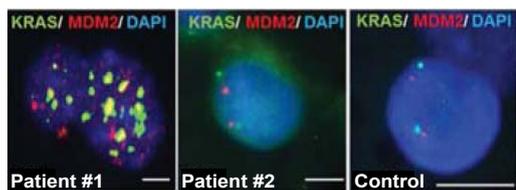


Figure 4. Fluorescence in situ hybridization (FISH) characterization on osteosarcoma CTC targeting MDM-2 and KRAS gene amplification between patient #1 and patient #2 in which patient #1 was diagnosed with lung metastasis while patient #2 had localized osteosarcoma.

### References:

1. Satelli A., et al., Cancer Research 2014; 74: 1645-1650.