SUPPLEMENTAL FIGURES

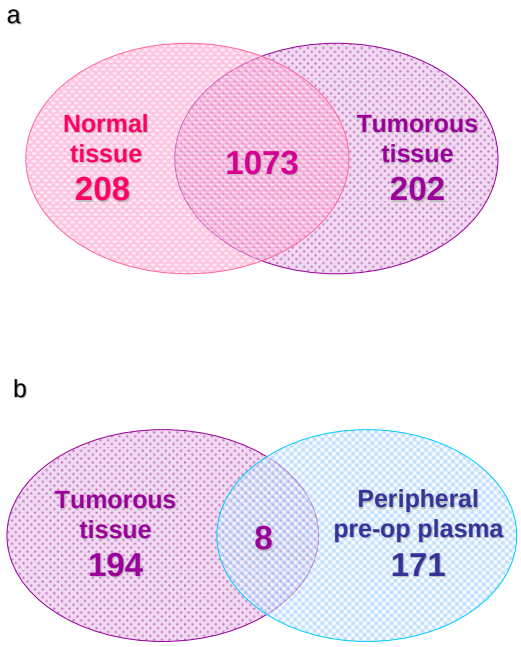
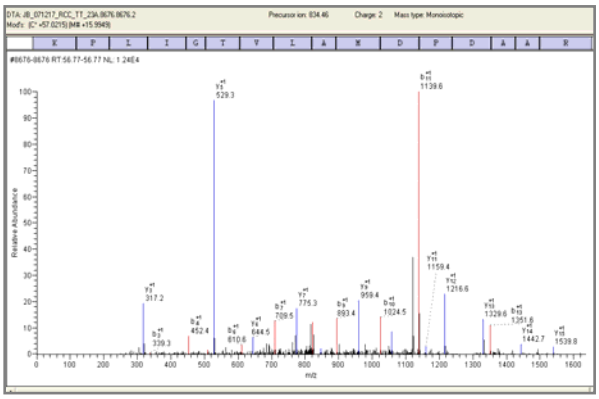


Figure S-1 (a-d). Venn diagrams depicting the results of the subtractive proteomic analysis employed for identification of tumor-residing proteins and their detection in blood from the patient diagnosed with RCC. **(a)** A Venn diagram illustrating the subtractive proteomic analysis used to reveal the identities of the tumor-residing proteins. A total of 1,281 protein species identified in normal adjacent tissue and 1,275 proteins identified in tumor tissue. A total of 202 proteins were identified by at least two protein specific peptides in the peptide fractions from tumor tissue but not in any of the technical replicates from normal adjacent tissue (kidney). These were considered as genuine tumor-residing proteins. **(b)** A Venn diagram illustrating subtractive proteomic analysis that was used to reveal the identities of tumor-residing proteins in the plasma of a patient diagnosed with RCC, by subtracting proteins identified exclusively in the tumor (202) versus those identified in plasma (179). Finally, subtractive analysis revealed a total of 8 tumor-residing proteins detected in plasma, which also exhibited a higher total peptide count in tumor tissue versus plasma, thus denoting them as genuine tumor-residing proteins detected in blood.

a



b

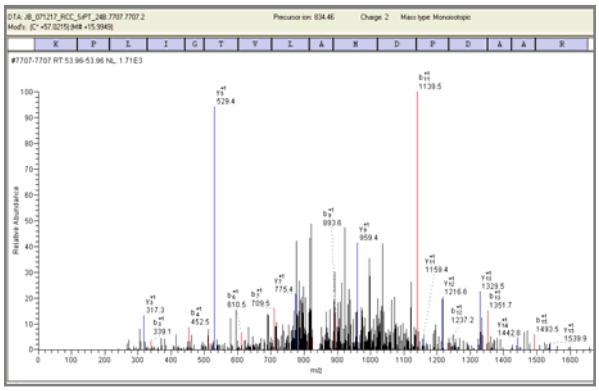


Figure S-2 (a-b) MS/MS spectra of the KPLIGTVLAMDPDAAR peptide identifying cadherin-5 in tumor (**a**) and peripheral plasma (**b**).

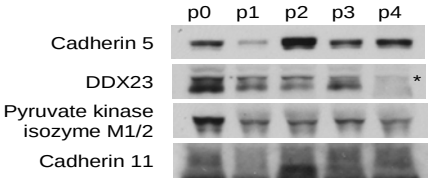


Figure S-3. Western blot analysis of cadherin-5, DDX23, pyruvate kinase M1/2 and cadherin-11. A total of 20 µg of depleted plasma protein from the patient under study **(p0)** and from an additional four patients diagnosed with RCC **(p1-4)** were separated on 4-20% Tris-Glycine gradient gels. The membranes were blocked by 3% bovine serum albumin and then probed overnight at 4 ˚C with anti-cadherin-5 MAb followed by peroxidase conjugated goat anti-mouse IgG secondary antibody. The asterisk in line 2, row 4, serves to indicate a faint band of DDX23 indicating lower level of this protein in the blood of a patient labeled as p4.