

ABSTRACT

Microfluidics sorter for cell detection and isolation

A microfluidic device is disclosed. The device comprises at least one inlet for
5 receiving circulating tumor cells and other cells in a sample; at least one curvilinear
and/or spiral channel through which the sample is caused to undergo partial or
complete Dean cycles to isolate the circulating tumor cells from the other cells; and
at least one outlet configured to communicate with the channel for providing the
isolated circulating tumor cells. The channel is configured to provide a
10 predetermined Force ratio based on a desired threshold cell size of the circulating
tumor cells. A corresponding method of manufacturing of the device, and a related
diagnostic system are also disclosed.

[Figure 5]