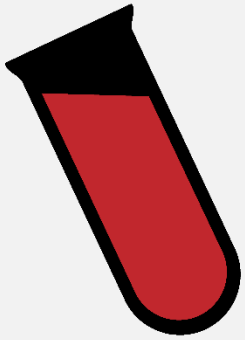
Brief Outline of The Process

DATAR
CANCER GENETICS

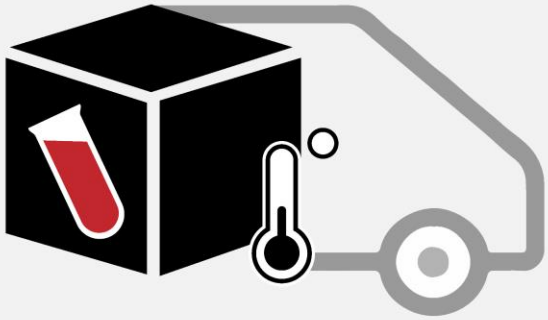
UNITED KINGDOM | GERMANY | INDIA

Step 1



In the first step, 20 mL blood is collected from the patient by an experienced phlebotomist.

Step 2



The sample is then transported to our facility under controlled conditions to preserve the shelf life and viability of the cells.

Step 3

We check the quality of the sample to ensure that it is non-hemolyzed and does not have any clots.

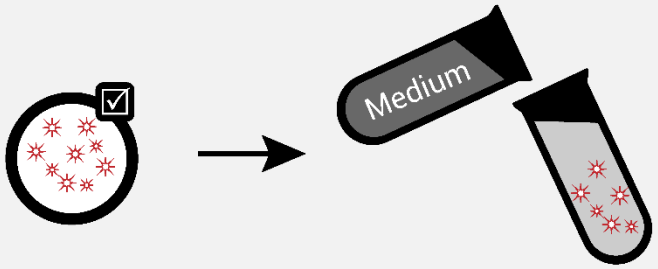
Step 4

Samples that pass the quality check are handed over to the laboratory for processing and analysis.

Step 5

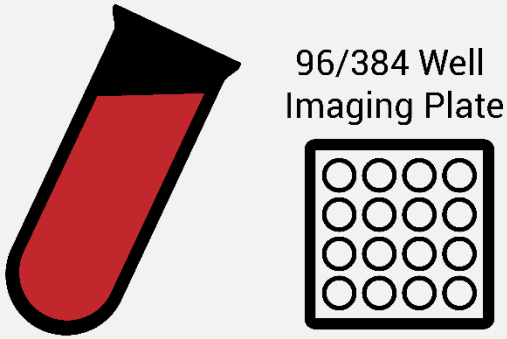
Next, the red blood cells (RBCs) are removed, and the remaining cells are separately collected. After cell enrichment, cell anchorage is observed to ensure proper anchorage and stability of the cells for further chemosensitivity testing. These cells also contain viable (living) CTACs that have escaped from the tumor into the blood.

Step 6



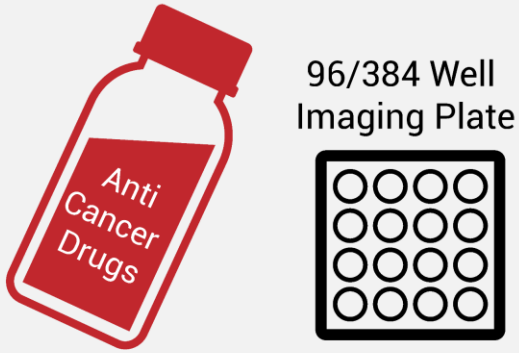
The cells are then treated with a special biological (liquid) medium. The medium helps in isolation of Circulating Tumor Associated Cells (C-TACs).

Step 7



The isolated C-TACs from the patient's sample are uniformly distributed into wells of 96 / 384 well imaging plate and the cells are stained with live cell imaging dye.

Step 8

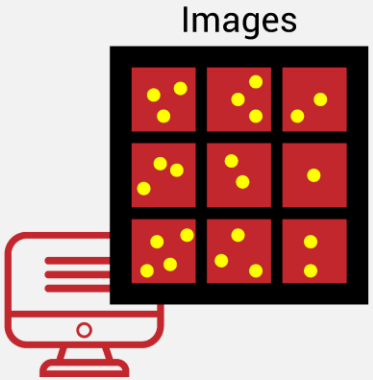


The C-TACs are treated with different anticancer drugs and incubated as per protocol.

Step 9

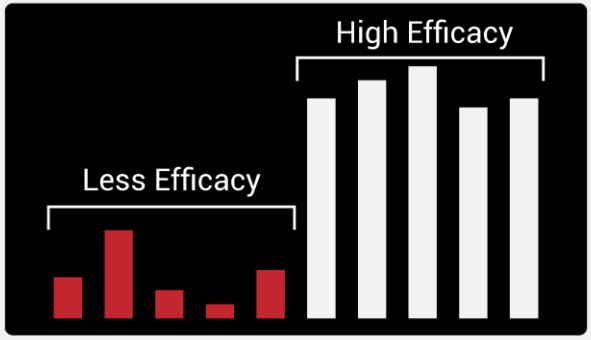
The multi-well plates containing the cells are placed inside the instrument that combines an incubator along with a high-throughput imaging system.

Step 10



During the drug treatment period, images of the stained CTACs are obtained every hour to monitor their viability.

Step 11



Based on the observed cell elimination, the drugs are classified as 'more' or 'less' effective for cancer treatment.

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