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Impact Of molecular testing on patient treatment outcome

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Treating Cancer had always been big challenge to the Oncologist, Patient and care givers. For almost a decade treatment offered was based on approved chemotherapy regimens with or without radiation therapy. The chemo regimens would consist of two or three chemo drugs to achieve cumulative effect but oncologists would face daunting task in managing the drug related side effects. Perhaps the premises of " One Size fits all" was working but side effects would take toll of psychological effect and long time to recover from side effect even after getting rid of disease.With the advent of sequencers (Sanger & NGS) and RTPCR'S , the thought process of " One size Fits all" got changed to " One size does not fits All" and started to stress on the individual treatment. Here the NGS played big role in sequencing Single Cell to Number of Genes (eg Hotspot Panels) which bore the result in just 5-7% of Patient, but seeing the positive impact on those patients resulted in researcher to think and individualise Diagnosis and treatment. So bigger panels were planned having more number of genes to analysis; bore results. Researchers felt Job is half done; this sets the realisation that deep Gene Investigations would help addressing the root cause of disease, better response, faster recovery and minimal side effects. So today we have Gene/Sub-Gene Mutation information's and treatment plans. Today with efforts of the researchers we have reached to stage wherein we are able to address and obtain in one go; case in point is Lung Cancer, previously oncologists used to order single gene testing Like EGFR-ALK- KRAS-ROS1-C-Met, but the information's would come in pieces. But NGS has helped doctors to analysis in one go.