



RAS gene
RAS proteins
Daraxonrasib (RAS inhibitor)

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Pancreatic Adenocarcinoma

USA FDA has approved the clinical use of Daraxonrasib in Pancreatic Adenocarcinoma

RAS the full form is
Rat Sarcoma gene
In 1960s
Viral Oncogene Causing Sarcoma in Rats
Described in 1960

RAS family of genes
K RAS. K stands for Kirsten
H RAS
N RAS

RAS gene is a protooncogene and its RAS proteins
Responsible for cellular signals from the cell surface to the Nucleus

On / Off switch

Regulates the cell proliferation. differentiation ,and survival

K RAS is mutated in 85 to 95 % of the RAS Mutations

In Pancreatic Adenocarcinoma 90 %
In Colorectal Adenocarcinoma 45 %
In Non Small Cell lung Cancer 34 %

Pancreatic Adenocarcinoma is a very deadly disease , difficult to treat , spreads fast and the cases are increasing fast in India and all over the world .

Active RAS acts through 2 pathways
1 RAF
2 PI3K

When this RAS gene is mutated it gets locked in " on " position
There is unchecked cell growth. and proliferation.

RAS Protein is mutated as
Mutated type
Wild type

It is an protooncogene

RAS test detects Mutation in K RAS and N RAS genes

This NGS test can be done on tissue. Biopsy surgical specimens and blood.

Daraxonrasib is the molecule that inhibits RAS

RAS(ON) inhibitor
It acts like a molecular glue

US FDA gave approval for this molecule in 2025

Given oral
Pill / tablet

Phase 3 clinical trials completed

500 patients in the trial
50 % received Daraxonrasib
And
Other 50 % received Chemotherapy

Results Median survival with this molecule 13.2 months
as against 6.7 months with Chemotherapy.

Side effects
Skin rash
Diarrhea
Nausea
Fatigue
Infection of the mucosa, stomatitis, mucositis .

Cost
1 mg vial costs 90 to 123 USD
100 mg vial costs 750 to 978 USD

This was an International trial
US. FDA has given approval

Presented at the American Society of Clinical Oncology at its Annual Conference

In stage IV Advanced Pancreatic Adenocarcinoma the life span is increased by months .

Dr. R.G. Wiseman Pinto is a Professor of Pathology, former Head of Department at Goa Medical College, former Dean of Goa University, and the current President of the Asian Society of Cytopathology (SACH)