

# **PROSTA-GEN DX™**

## **A NEW Biopsy-based tool for prostate cancer management**

**Examines two major mechanisms  
of carcinogenesis**

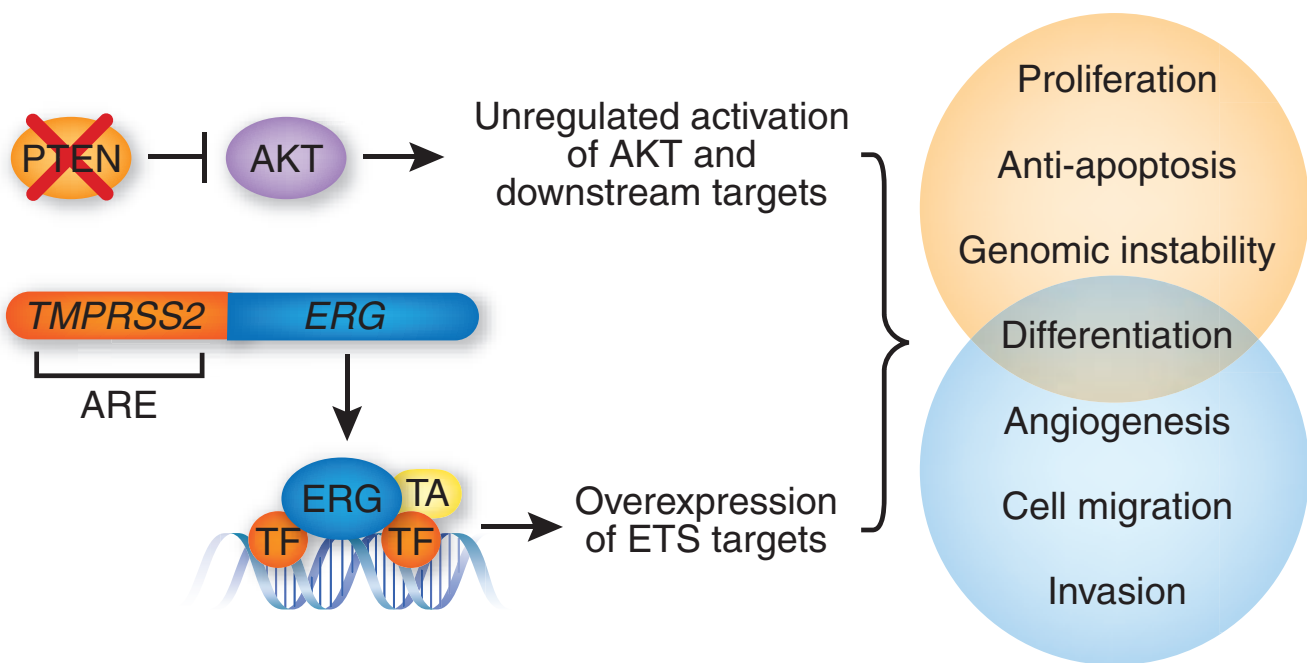
**P-TEN**

**LOSS OF TUMOR  
SUPPRESSOR  
GENE**

**TMPRSS2:ERG**

**GENE FUSION/  
TRANSLOCATION  
ANEUPLOIDY**

# PROSTATE CANCER PROGRESSION



# ONLY TECHNOLOGY THAT COMBINES HISTOLOGIC, MOLECULAR AND CLINICAL PARAMETERS TO PREDICT DISEASE PROGRESSION

## HISTOLOGIC

- Quantitatively captures and analyzes cellular features
- Pathologist selects the most representative tumor area for analysis

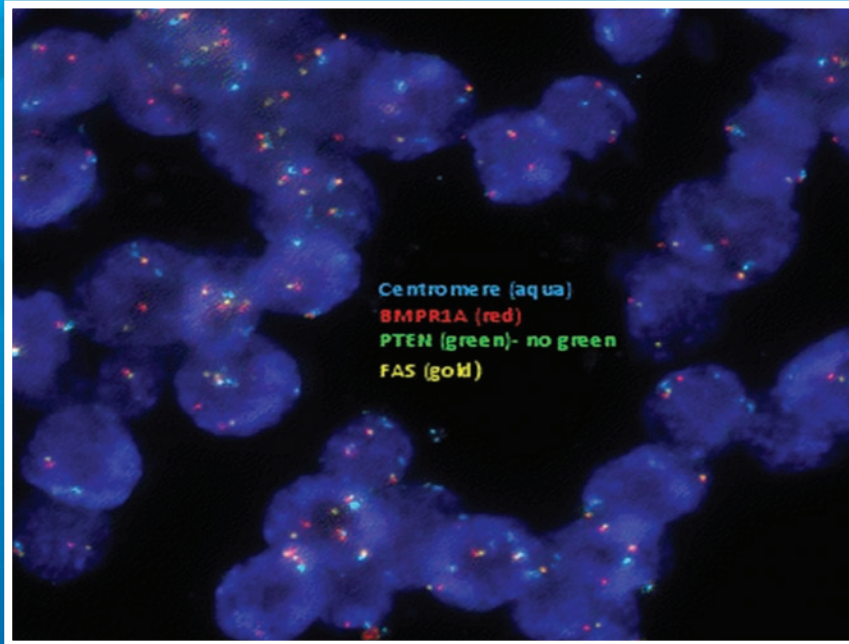
## MOLECULAR

- Fluorescent in-situ hybridization captures loss or translocation of gene.
- Computer digital imaging quantifies and captures biologic results.

## CLINICAL

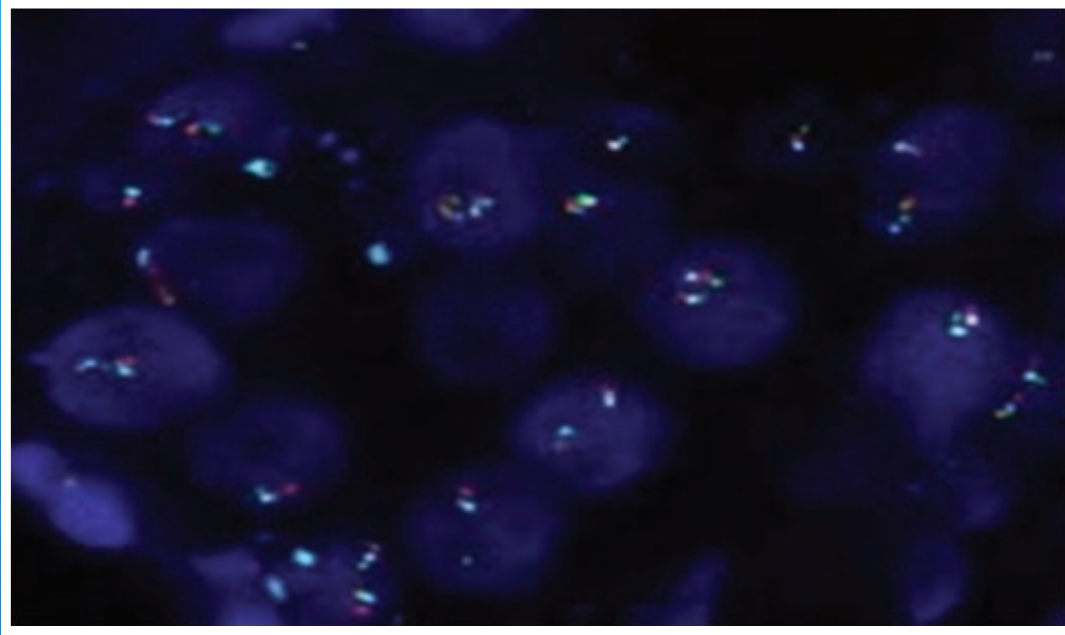
- Incorporates clinical features to complete patient analysis.
- Biopsy Gleason Score

# PTEN



- The PTEN (phosphatase and tensin) gene encodes a phosphatase which counteracts the PI3K/Akt signaling pathway, one of the most critical cancer-promoting pathways identified to date. It is involved in the regulation of DNA repair, genomic instability, stem cell self-renewal, cellular senescence, and cell migration (metastasis).
- Studies published, correlate PTEN deletion with poor clinical outcome in cases of hormone refractory prostate cancer, with 42.6% of tumors displaying the PTEN deletion. In addition, it has been observed that the frequency and type of PTEN deletion is correlated to disease progression and early biochemical recurrence.

# TMPRSS2:ERG



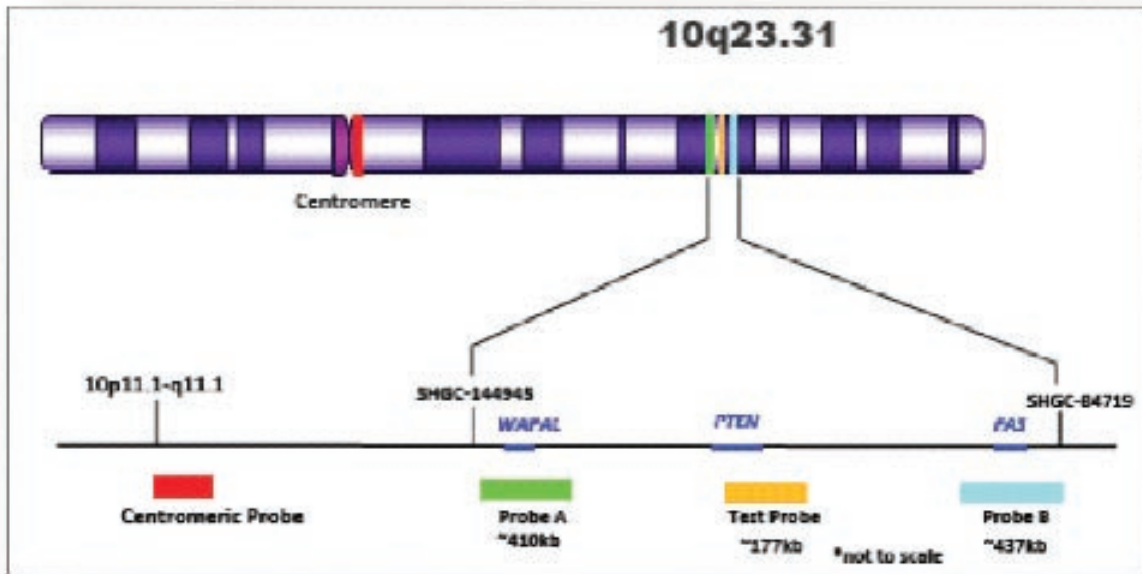
- TMPRSS2-ERG gene rearrangements are present in 30-50% of prostate cancer and lead to over expression of a truncated ERG protein. The presence of the rearrangement may have prognostic significance and assist in patient stratification to guide therapy.
- Hormonally treated PCa patients having an ERG rearrangement have a significantly increased risk of becoming castration resistant compared to patients without the rearrangement. This is a sign of more aggressive disease and could potentially be used to identify patients less likely to respond to hormone treatment.

# At diagnosis

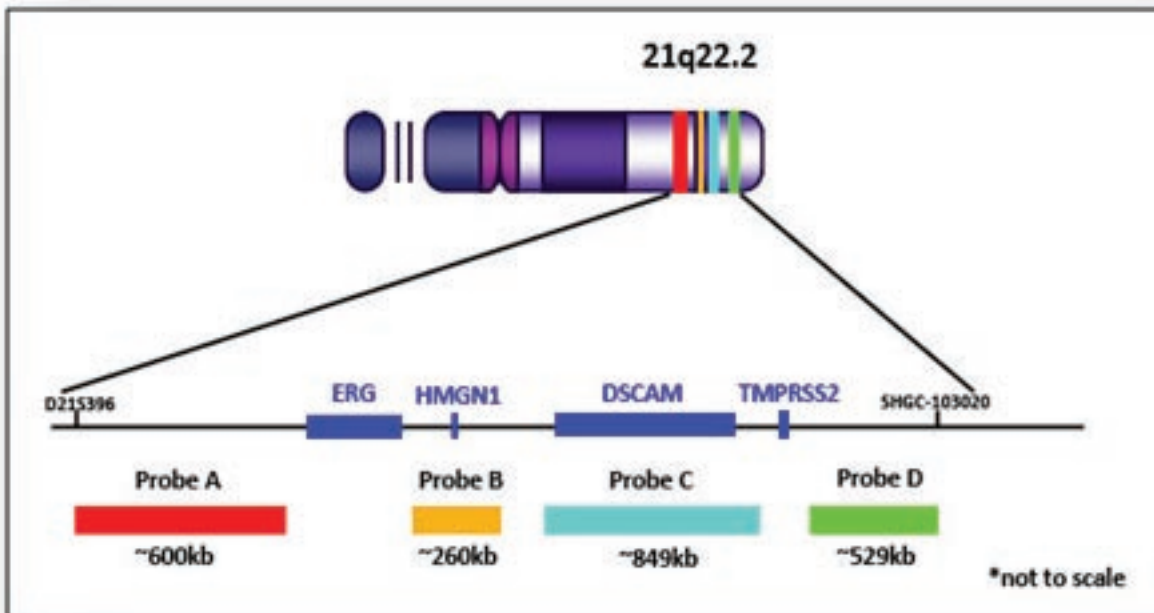
We have used multiple scientific disciplines to predict disease progression at the time of diagnosis.

- Two major mechanisms of carcinogenesis are examined.
- Generates a personalized prediction of risk of disease progression.
- Determines patients' genetic prognosis for serious disease progression.
- Delivers clinically proven, reliable results.
- Provides physicians and patients with enhance insights for treatment decisions.

# P-TEN



# TMPRSS2:ERG



# PROSTA-GEN DX™ REFERENCES

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