Poster No. 087

Active Surveillance Selection and Durability in Men with NCCN Intermediate-Risk, Localized Prostate Cancer Who Had Genetic Testing

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Background

- High-quality evidence and guidelines support active surveillance (AS) in intermediate-risk prostate cancer with favorable clinical variables.[1, 2]
- Genomic testing can add valuable information to standard clinical risk factors, allowing for more accurate identification of AS candidates.
- **Objective:** To describe initial AS selection and 3-year durability in men with NCCN intermediate-risk prostate cancer who received genetic testing.

Methods

Genetic Testing

- The clinical cell-cycle risk (CCR) score combines the University of California, San Francisco's Cancer of the Prostate Risk Assessment (CAPRA) and the cell cycle progression molecular score to accurately assess prostate cancer aggressiveness.
- Recommends patients for AS based on a validated threshold. [e.g., 3, 4]

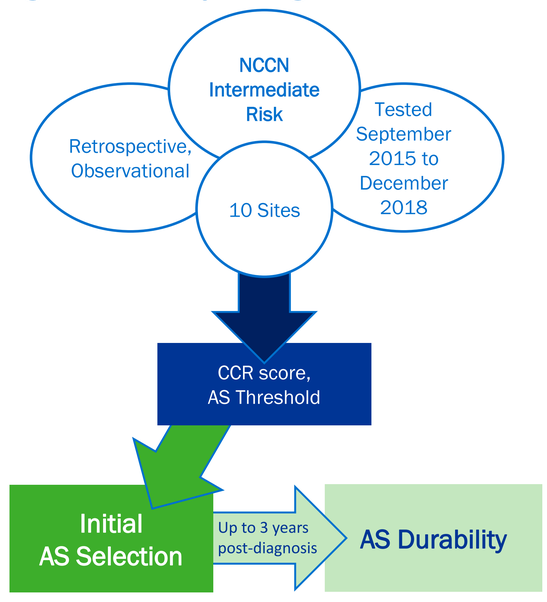
AS Selection

- Defined as no switch to definitive treatment (DT) within 6 months from time of initial diagnosis.
- Univariable and multivariable logistic regression models were used to evaluate initial treatment. decisions.

AS Durability

- Defined as time from diagnosis to first treatment for patients who initially chose AS.
- Cox proportional hazard models and Kaplan-Meier methods were used to evaluate AS durability.

Figure 1: Study Design



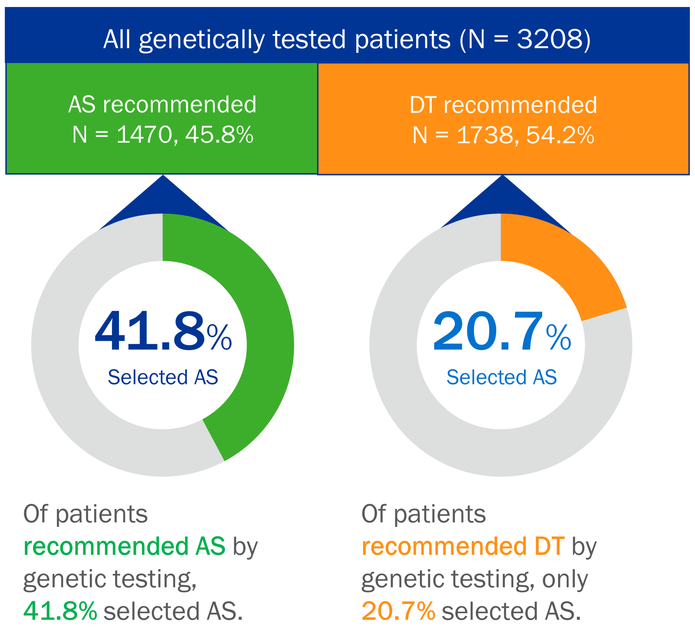
Results

Table 1: Patient Demographics

Statistic	AS Selection Analysis Set N (%) or Median (IQR)	AS Durability Analysis Set N (%) or Median (IQR)
N	3208	960
Initial AS Selection	975 (30.4%)	960 (100%)
Age	67 (61, 72)	68 (62, 73)
Gleason Score		
3+3	331 (10.3%)	183 (19.1%)
3+4	2219 (69.2%)	699 (72.8%)
4+3	658 (20.5%)	78 (8.1%)
CCP	-0.6 (-1.0, -0.1)	-0.8 (-1.2, -0.3)
CAPRA	3 (2, 4)	3 (2, 3)
CCR	0.933 (0.495, 1.446)	0.657 (0.324, 1.056)
Below AS Threshold	1470 (45.8%)	605 (63.0%)

AS = active surveillance, CAPRA =University of California, San Francisco's Cancer of the Prostate Risk Assessment, CCP = cell-cycle progression, CCR = cell-cycle risk; IQR = interquartile range.

Figure 2: Initial AS Selection

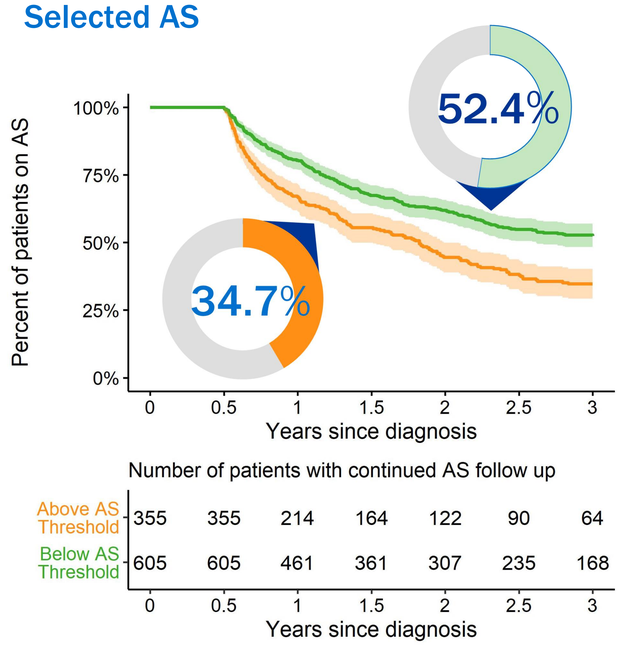


Of patients recommended AS by genetic testing, 41.8% selected AS.

Of patients recommended DT by genetic testing, only 20.7% selected AS.

Fig. 2: Patients recommended AS are about 2x as likely to select AS than patients recommended DT (p-value<0.001). In multivariable analysis, treatment choice is significantly associated with the genetic test recommendation, even after accounting for CAPRA or Gleason score (p-values<0.001).

Figure 3: 3-Year AS Durability in Patients who Initially Selected AS



For patients recommended AS by genetic testing, AS durability was 52.4% at 3 years.

For patients recommended DT by genetic testing, AS durability was 34.7% at 3 years.

Fig. 3: 3-year AS durability was significantly higher in patients initially recommended AS than those recommended DT (p-value<0.001). In multivariable analysis, AS durability is significantly associated with the genetic test recommendation, even after accounting for CAPRA or Gleason scores (p-values<0.001).

Discussion

- The observed 41.8% AS selection rate in this study exceeds previously observed rates
  - Without access to genomic information, 7.5% of intermediate-risk patients chose AS over the same time period.[5]
  - In the AQUA Registry, 10.4% of intermediate-risk patients chose AS in 2014 and 20.4% chose AS in 2019.[6]
- The current study largely predated guideline changes noting the utility of AS in favorable-intermediate risk men, indicating that AS rates may continue to increase.[7, 8]
- **Conclusion:** The personalized risk information offered by genetic testing can help identify AS candidates and was predictive of AS durability, thereby informing treatment decisions and improving clinical outcomes.

References

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