

MP77-08: PROSTATE CANCER PRESENTATION IN A COMMUNITY SETTING A DECADE SINCE THE USPSTF GRADE D RECOMMENDATION

Franklin D. Gaylis, Michael Leapman (Yale School of Medicine, Connecticut), Edward S. Cohen, Paul E. Dato, Hilary Prime, Robert Topp, Julie Cramer, Katayune Golshan, Sepi Mahooti, William J. Catalona (Northwestern, Chicago)

Background

- Several major watersheds appear to have impacted PSA-based prostate cancer (PCa) screening over the past 15 years ¹
- An **ominous migration towards more** aggressive PCa was noted in men undergoing prostate needle biopsy a few years following the U.S. Preventive Services Task Force (USPSTF) Grade D recommendation against PSA-based PCa screening for all men in 2012 ²
- USPSTF recommendations against PSA-based PCa screening have been temporally associated with **significant increases in metastatic PCa incidence rates over the last decade** ³
- The 2012 USPSTF Grade D recommendation may be a factor responsible for the **flattening or increase in prostate cancer specific mortality (PCSM)** ⁴
- We present a prospective analysis of **PCa tumor burden, Gleason score, median PSA, and prostate biopsy positivity rates** in a community setting a decade since the Task Force Grade D recommendation

Methods

- Between April 2011 and December 2021, 7,914 cases of men undergoing a prostate biopsy were prospectively abstracted from the Genesis Healthcare Partners electronic health record (EHR).
- Prostate biopsy numbers, rates positive for cancer, Gleason score (6, 7, 8-10), maximum positive biopsy core percentage involvement with cancer, and PSA levels were collected. (Figures 1-5)
- Volume of patients with BPH and hematuria were assessed to reflect overall patient volume during the study period (Figure 6)
- Chi-square statistics determined whether the percentage of positive biopsies and the proportion of positive biopsies exhibiting a Gleason score ≥ 7 changed during the study period.
- A one-way ANOVA with post hoc comparisons was used to evaluate whether the changes in the maximum percentage of involvement of biopsy cores with cancer changed significantly during the study. A Kruskal-Wallis test determined if there was a statistically significant difference between the annual median PSA measures over the duration of the study.

Results

- The rate of positive biopsies significantly increased from 45.52% in 2011 to 62.00% in 2021.
- The percentage of patients graded with low-risk disease (Gleason Grade 6) significantly decreased from 50.15% in 2011 to 31.41% in 2021, the percent of intermediate-risk disease significantly increased from 33.23% in 2011 to 43.22% in 2021 and the percent of high-risk disease (Gleason 8-10) significantly increased from 16.2% to 25.38% in 2021.
- The percent of maximum core prostate cancer positivity obtained in 2011 was lower (48% + .33) than the percent of positive cores obtained in 2020 (54% + .30) or 2021 (55% + .29).
- The median PSA level in 2011 (6.90) was significantly lower than the median PSA level in 2020 (8.56) and 2021 (9.00).

Figure 1 Pathology results among patients presenting for first-time prostate biopsy

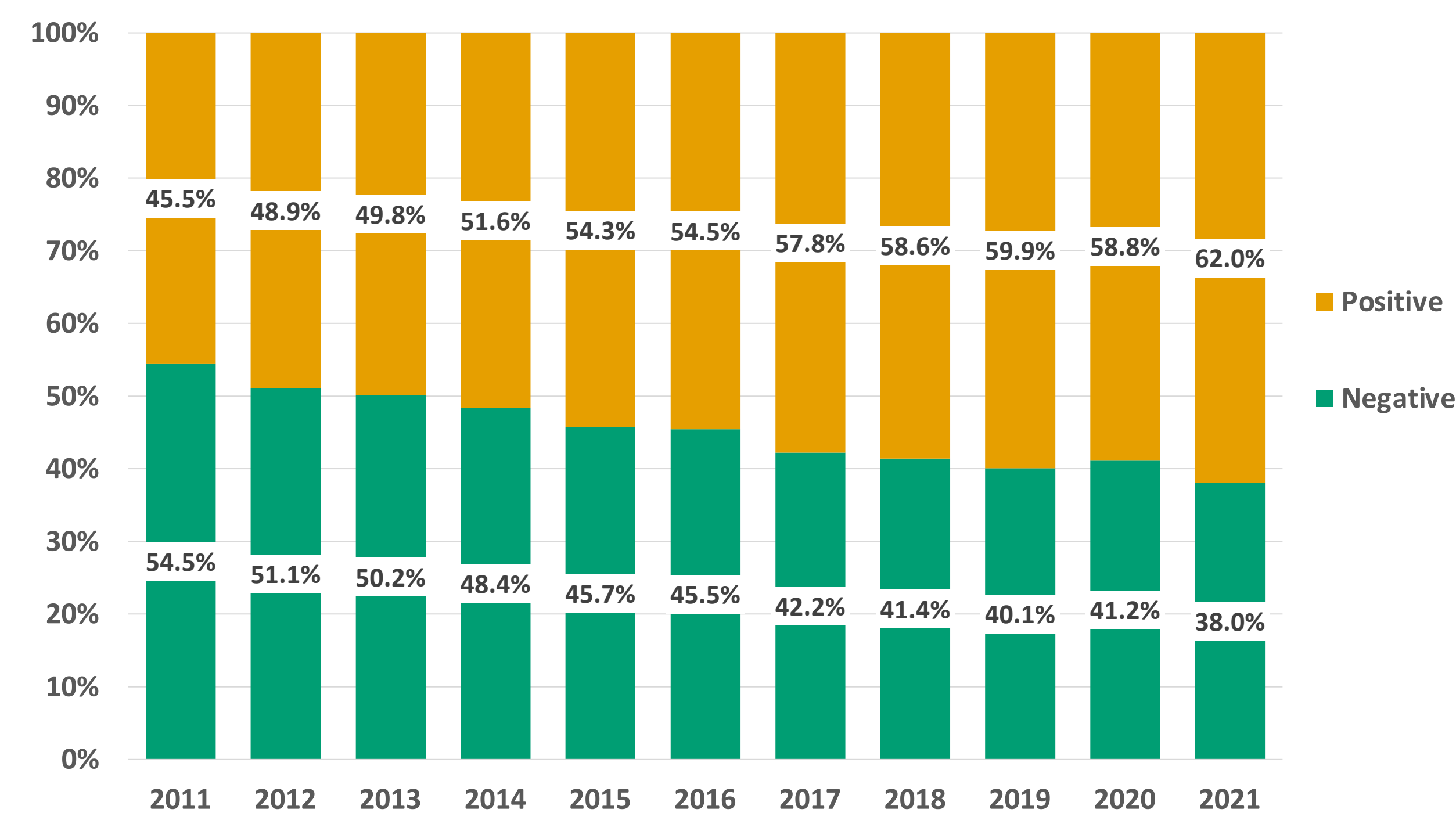


Figure 2 Gleason score volume by year

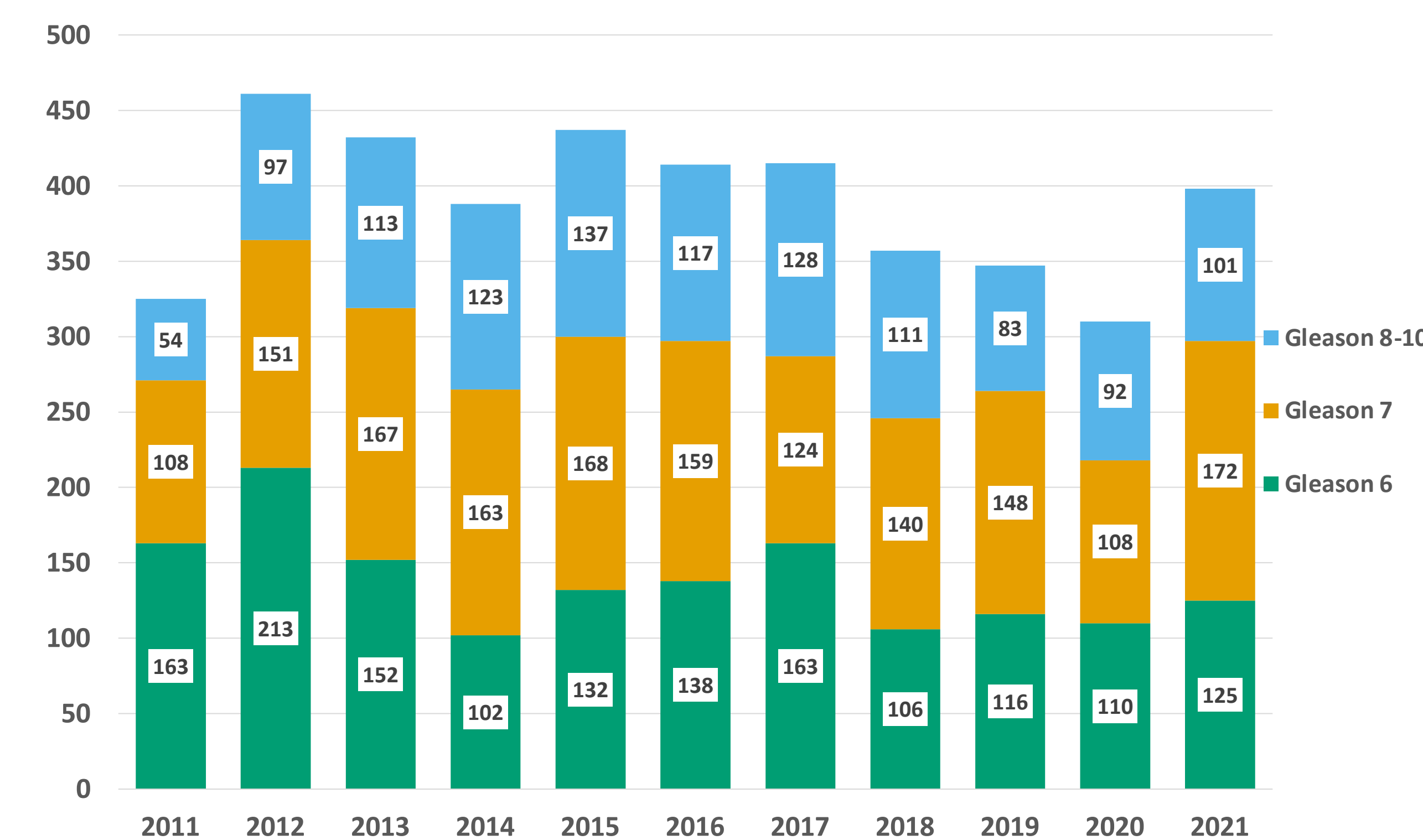


Figure 3 Gleason score distribution by year

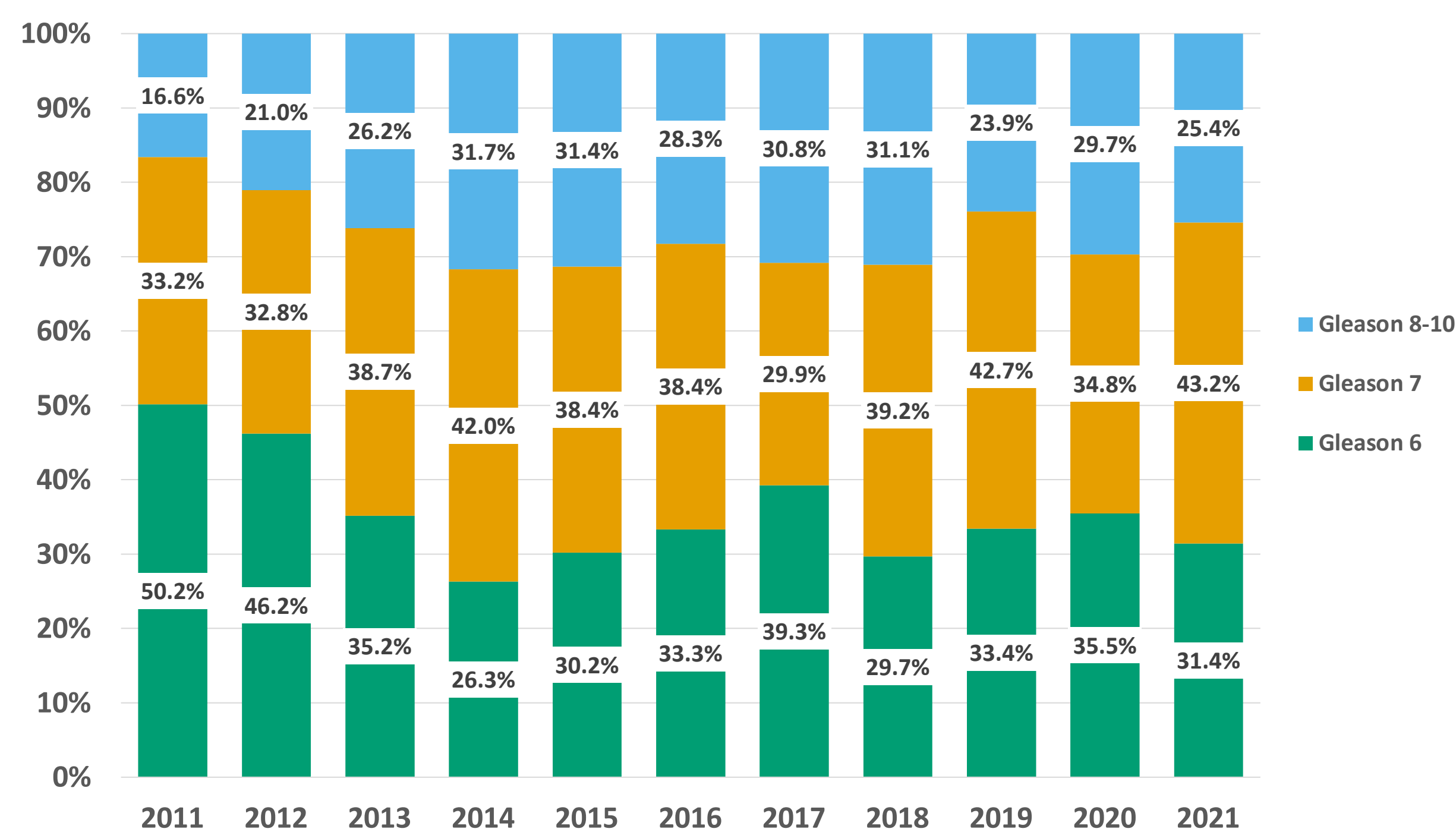


Figure 4 Mean maximum biopsy core positivity percentage by year

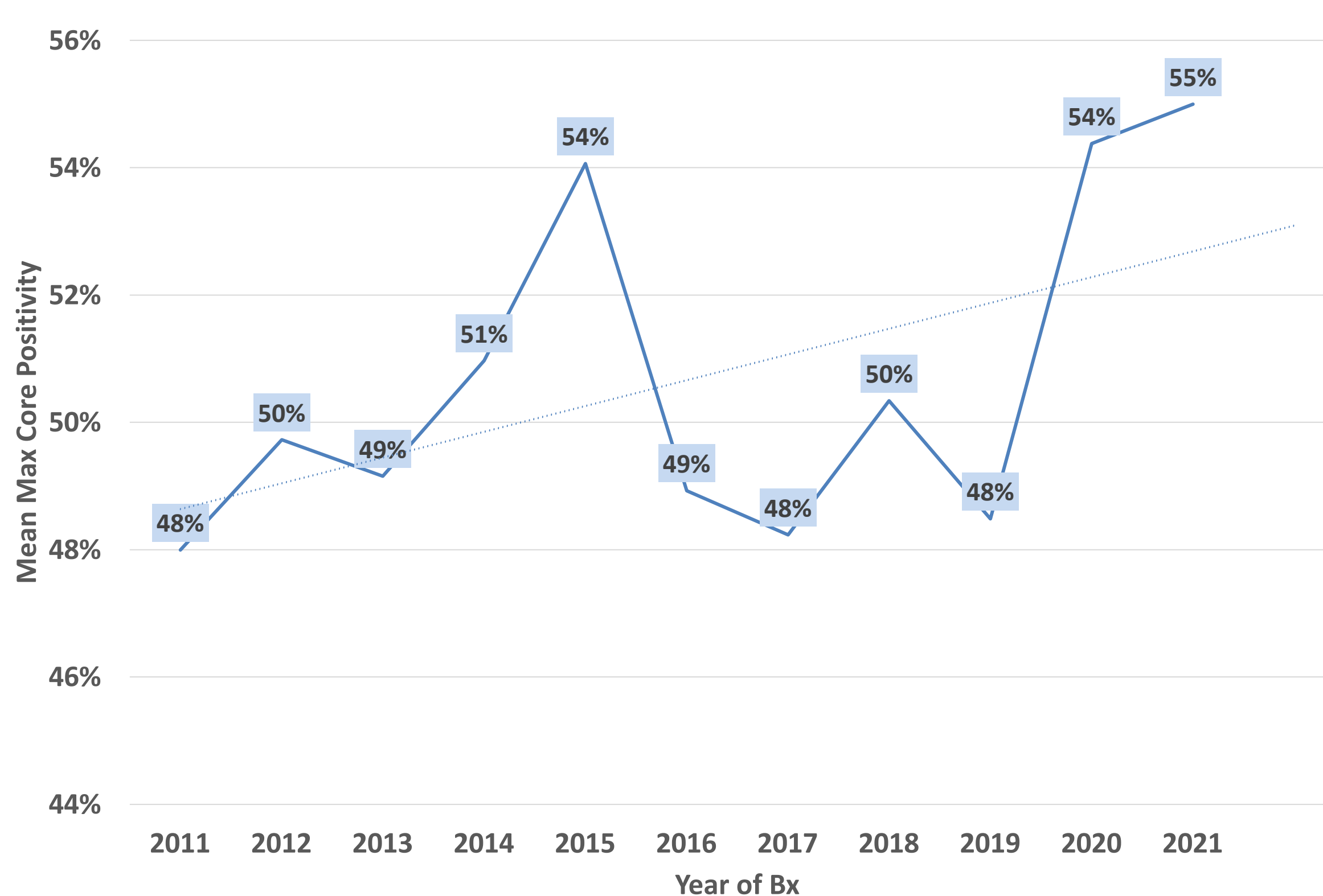


Figure 5 Median PSA at prostate cancer diagnosis

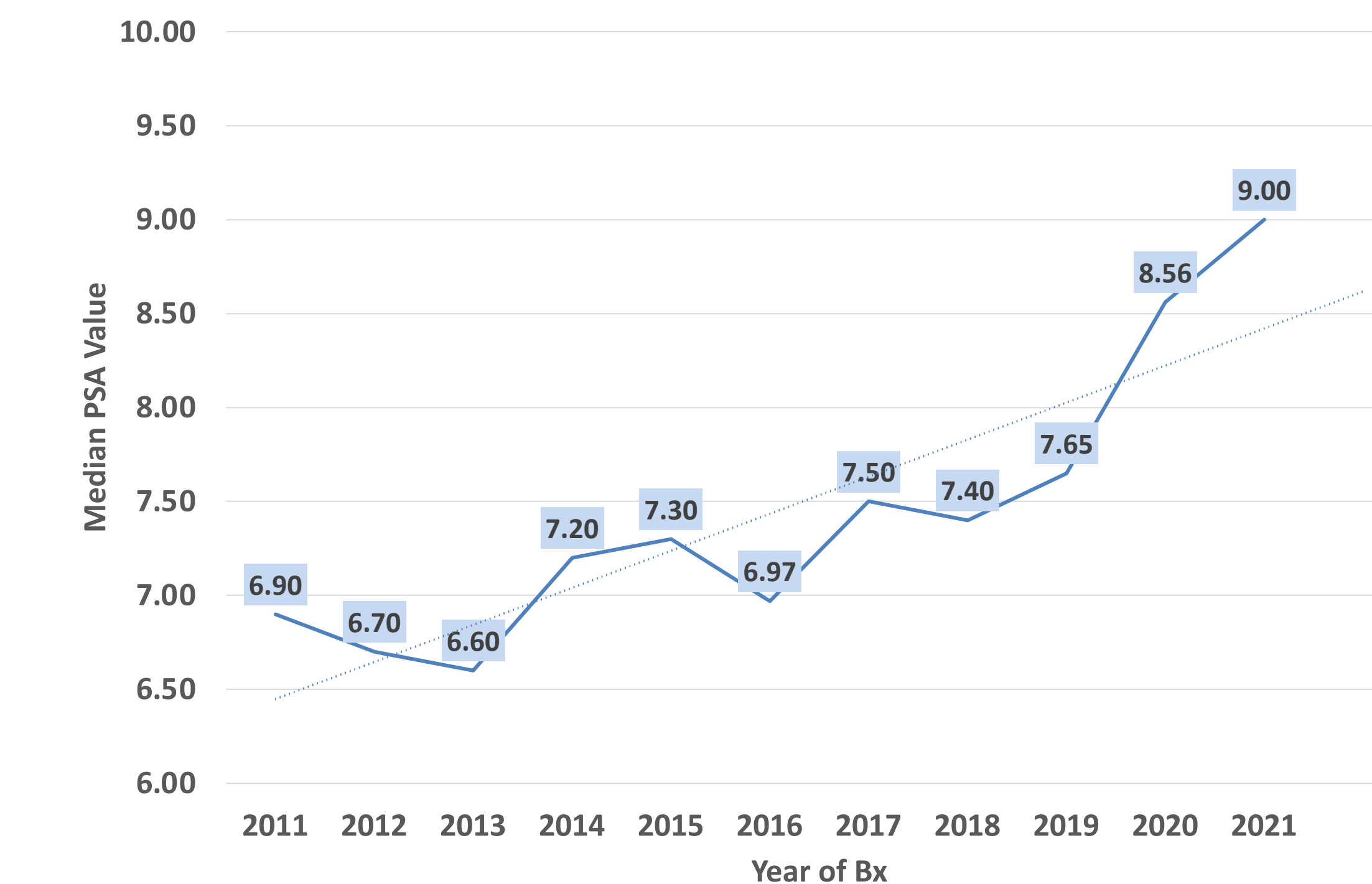
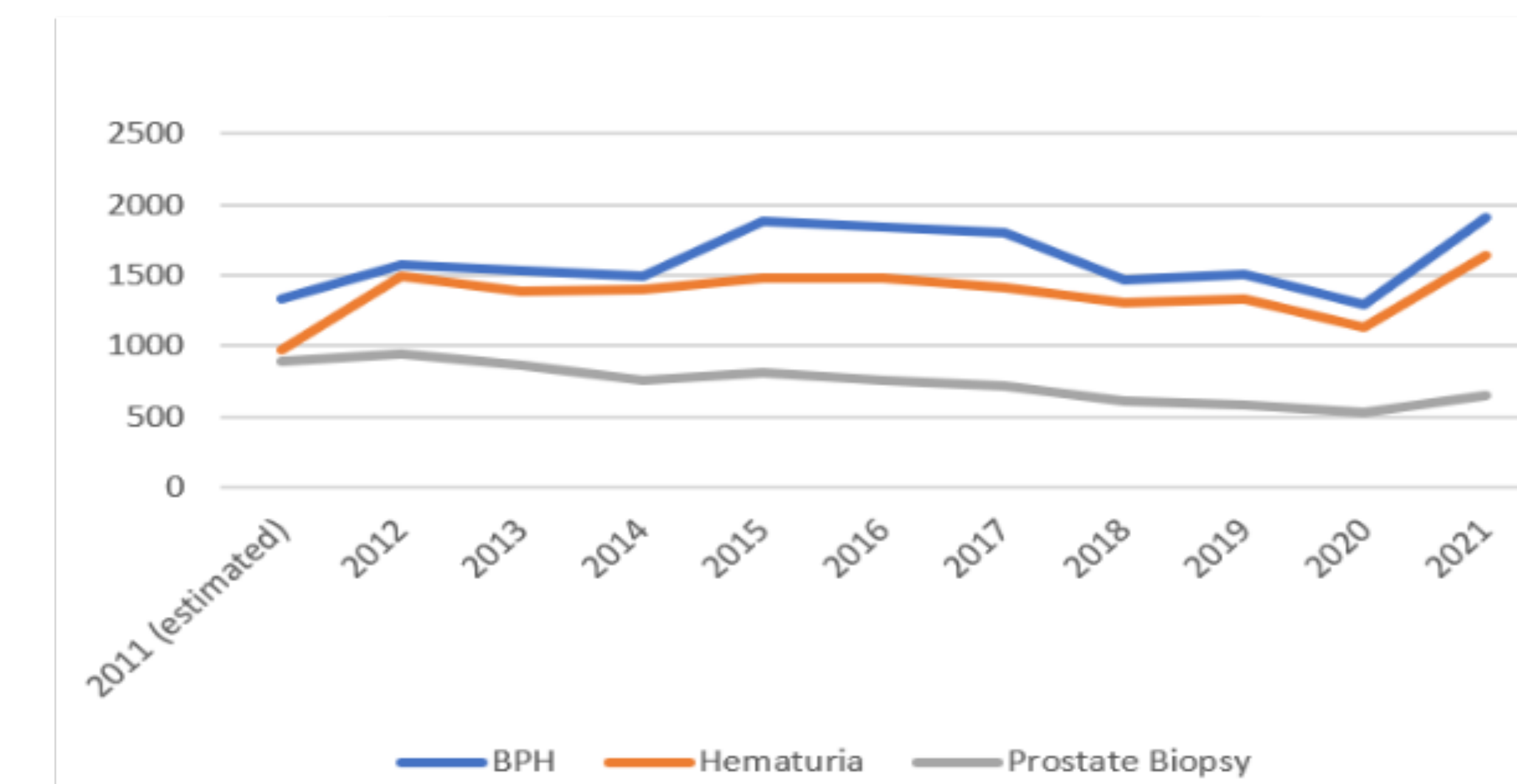


Figure 6 Reasons for clinic visits 2011-2021



Conclusion

- Prostate cancer pathologic presentation was temporally and adversely associated with the USPSTF 2012 recommendation against PCa screening.
- Our findings are consistent with the recently observed trends in increasing metastatic PCa and PCSM rates since the USPSTF recommendation against PCa screening in 2012.
- A greater emphasis on primary care education regarding appropriate prostate screening is needed.

1. Grade Migration of Prostate Cancer in the United States During the Last Decade. Leonardo D. Borregales LD, MD, DeMeo G and BS,1 Gu X et al. JNCI J Natl Cancer Inst (2022) 114(7): djac066
 2. Trends in Metastatic Breast and Prostate Cancer. Gaylis FD, Choi J and Kader AK. NEJM 374;6. February 11, 2016
 3. Trends in Incidence of Metastatic Prostate Cancer in the US Desai MM, Cacciapani GE, Karanvir Gill K et al. JAMA Network Open. 2022;5(3):e222246. doi:10.1001/jamanetworkopen.2022.2246
 4. Association of the USPSTF Grade D Recommendation Against Prostate-Specific Antigen Screening With Prostate Cancer-Specific Mortality. Burgess Laura., Aldrighetti CM and Ghosh A et al. JAMA Network Open. 2022;5(5):e2211869 doi:10.1001/jamanetworkopen.2022.11869



SCAN ME TO READ MORE!

