Longitudinal Changes in Metabolic Syndrome Risk Factors (MSRF) Screening and Treatment Rates Between 2010 and 2021 Among Patients With Prostate Cancer (PCa) Treated With Androgen Deprivation Therapy (ADT)

HSD19

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INTRODUCTION

ADT is widely used in treating localized or metastatic PCa and associated with toxic cardiovascular/metabolic adverse events that may occur 6-months after therapy initiation.

A 2010 U.S. science advisory guideline for providers caring for PCa patients included MSRF evaluation within 6-months of ADT initiation and annual assessment thereafter.[1]

Similarly, in 2010, the U.S.-FDA issued a drug safety communication regarding increased CVD risk (AMI, stroke, sudden cardiac death) and T2DM among patients treated with one class of ADT medications, GnRH agonists.[2,3]

OBJECTIVE

We hypothesized that awareness, uptake and adherence to the 2010 guidelines would increase/optimize MSRF screening/treatment rates over time.

This study assessed longitudinal changes in MSRF screening/ treatment rates between 2010 and 2021 among ADT treated PCa patients at a university-affiliated comprehensive cancer center in the southwestern United States (U.S.).

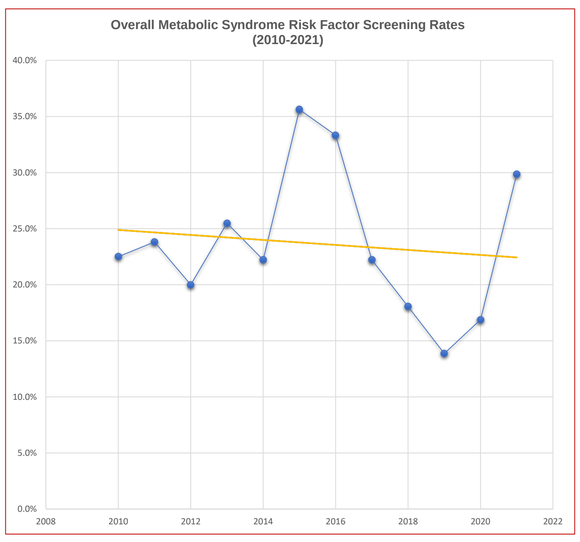
METHODS

- Retrospective observational cohort study of 803 PCa patients treated with ADT for at least 6-months.
- Patients followed 3-months pre- to 12-months post ADT initiation to evaluate MSRF screening/treatment.
- MSRF screening determination included MSRF screening/ treatment referral or receipt of blood glucose, lipid profile, and blood pressure screening within 6-months ADT treatment.
- MSRF treatment was among patients with a confirmed MSRF diagnosis(es) and a treatment indication for MSRF.
- Patients were MSRF treated if they started/continued recommend therapy within 6-months of ADT initiation.

RESULTS

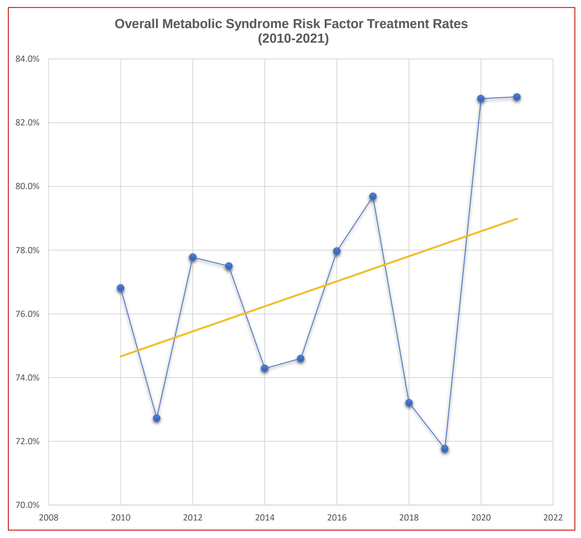
- Mean annual MSRF screening rate was low (23.5%). 2010 screening rate (22.5%) increased to 35.6% in 2015, low of 13.9% in 2019, and 29.9% in 2021. (Figure 1.)
- Mean annual MSRF treatment rate was 76.9 % with increasing trend from 76.8% in 2010 to 82.8% in 2021. (Figure 2.)
- No clear longitudinal trend or pattern was observed for MSRF screening rate as guidelines became widely distributed over the 10-year study period.
- Other than African American patients, minority patients had significantly lower proportion of having MSRF screening. (Table 1.)

Figure 1. Metabolic Syndrome Risk Factor Screening Rates Among Prostate Cancer Patients Treated with Androgen Deprivation Therapy (2010-2021)



Year	MSRF Screening
2010	22.5%
2011	23.8%
2012	20.0%
2013	25.5%
2014	22.2%
2015	35.6%
2016	33.3%
2017	22.2%
2018	18.1%
2019	13.9%
2020	16.9%
2021	29.9%
Total	23.5%

Figure 2. Metabolic Syndrome Risk Factor Treatment Rates Among Prostate Cancer Patients Treated with Androgen Deprivation Therapy (2010-2021)



Year	MSRF Treatment
2010	76.8%
2011	72.7%
2012	77.8%
2013	77.5%
2014	74.3%
2015	74.6%
2016	78.0%
2017	79.7%
2018	73.2%
2019	71.8%
2020	82.8%
2021	82.8%
Total	76.9%

Table 1. Overall MSRF Screening Rates By Race/Ethnicity (2010-2021)*

Screening	NHW, n (%)	Hispanic	AA	AI/AN/HN	Asian	Total
Yes	122 (26.8%)	43 (17.8%)	15 (30.6%)	6 (14.6%)	3 (18.8%)	189 (23.5%)
No	333 (73.2%)	199 (82.2%)	34 (69.4%)	35 (85.4%)	13 (81.2%)	614 (76.5%)
Total	455 (100%)	242 (100%)	49 (100%)	41 (100%)	16 (100%)	803 (100%)

*Among all racial/ethnic groups, significant differences in the proportion of patients receiving guideline-concordant MSRF screening: $\chi 2$ (4) = 10.563, p=0.03.

*AA: African American, AI/AN/HN: American Indian/Alaskan Native/Hawaiian Native, MSRF: Metabolic Syndrome Risk Factor, NHW: Non-Hispanic White.

CONCLUSIONS

Other than African American patients, minority populations receiving androgen deprivation therapy had significantly lower proportions undergoing screening for metabolic syndrome risk factors than non-Hispanic White patients.

MSRF screening and treatment with ADT was variable over time in this study population. Provider education and development/ implementation of interventions may be needed to optimize adherence to MSRF screening and treatment in PCa patients.

REFERENCES

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