	Hospital Negrin	Hospital Candelaria	P
Number of patients	80	105	
Age, mean (SD)	82 (7)	82 (8)	0.96
Sex, women n (%)	64 (80)	71 (67)	0.06
Previous fracture, n (%)	13 (16)	12 (11)	0.34
Previous treatment			
Ca and VD, n (%)	26 (32)	13 (12)	<0.001
Bisphosphonate or equivalent, n (%)	8 (10)	9 (8)	0.73
Treatment in the discharge report			
Ca and VD, n (%)	77 (96)	19 (18)	<0.001
Bisphosphonate or equivalent, n (%)	73 (91)	9 (8)	<0.001
Treatment at 6 months			
Ca and VD, n (%)	60 (90)*	27 (29)**	<0.001
Bisphosphonate or equivalent, n (%)	50 (75)*	14 (15)**	<0.001

Ca and VD: calcium and vitamin D. *Data available from 66 patients; 9 not located, 4 deaths, 1 atypical fracture. **Data available from 93 patients; 4 not located, 8 deaths.

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Disclosure of Interest: None declared

FRI0531   **DUAL ENERGY X-RAY ABSORPTIOMETRY TESTING IN ELDERLY MEN WITH PROSTATE CANCER INITIATING ANDROGEN DEPRIVATION THERAPY REDUCES SUBSEQUENT FRACTURE RISK**

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Background: Androgen deprivation therapy (ADT) is a mainstay therapy for prostate cancer, and a risk factor for bone mineral density (BMD) loss and fractures. Despite this risk, few patients undergo measurement of BMD when initiating ADT. Conceivably, screening for bone loss could lead to identification of patients at risk, and to implementation of bone conserving therapy (BCT), and subsequent decrease in fracture risk.

Objectives: To evaluate the utilization of Dual Energy X-ray Absorptiometry (DXA) testing for measurement of BMD in elderly patients with prostate cancer initiating treatment with ADT, and the effects of testing on subsequent fracture risk.

Methods: We conducted a population-based retrospective cohort study using the Surveillance, Epidemiology, and End Results (SEER) and Texas Cancer Registry (TCR) databases linked to Medicare claims. Medicare is the United States national health insurance program for individuals aged 65 and older. We identified all men over 66 years old with a diagnosis of prostate cancer who received ADT. We identified claims for DXA within 12 months prior, and 12 months after ADT initiation. We assumed that if patients had DXA testing in the year before ADT, this would not be repeated. We then ascertained claims for fractures during follow-up after ADT onset, comparing those who had undergone DXA with those who had not. Statistical analysis included multivariate logistic regression adjusting for demographic and clinical variables.

Results: The cohort included 36,739 men with prostate cancer treated with ADT; 48.3% were over 75 years of age and 75% were white. Only 5.2% of the patients underwent DXA within the window of evaluation. Men were more likely to have DXA id the were white vs. African American, and if the lived in census tracts with higher socio-economic status. When comparing the incidence of fractures, 11.3% of those who underwent DXA had a fracture, compared to 19.4% of those who did not undergo DXA (p<0.0001). In the multivariate model an increase in the odds for a fracture was associated with older age, being White, having a prior history of osteoporosis or fracture, were evaluated with DXA.A decrease in the odds for a fracture was associated with having undergone DXA testing (0.70; 95% CI 0.61 – 0.80).

Conclusions: Very few patients with prostate cancer starting ADT undergo DXA despite being at increased risk of fracture. DXA use was associated with socioeconomic status. Our results show that patients who underwent DXA were significantly less likely to have a fracture. Our findings suggest that DXA should be performed in all patients with prostate cancer initiating ADT.

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Disclosure of Interest: None declared

FRI0532   **DUAL ENERGY X-RAY ABSORPTIOMETRY TESTING IN WOMEN WITH BREAST CANCER INITIATING THERAPY WITH AROMATASE INHIBITORS REDUCES SUBSEQUENT FRACTURE RISK**

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Background: Estrogen receptor positive breast cancer is commonly treated with aromatase inhibitors (AI). A well-known adverse effect of this therapy is osteoporosis and related bone fractures. National guidelines have promoted the use of dual energy X-ray absorptiometry (DXA) for screening purposes.

Objectives: To evaluate the association between use of DXA among women with breast cancer treated with AI enrolled in Medicare, and subsequent fracture risk.

Methods: Retrospective cohort study using the Texas Cancer Registry (TCR) and the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) data linked with Medicare claims. To help estimate the likelihood of performing a DXA, a multivariable logistic regression model was used. Covariates of age, ethnicity, stage, residence area, and socioeconomic variables were controlled for the analyses. The outcome variable a DXA claim within 12 months after the initiation of the AI therapy. Cox regression model to evaluate time to first fracture after initiation of AI.

Results: The total number of cases within the SEER-Medicare database was 15,350 and in the TCR 4,532. Women aged between 66–74 years and Non-Hispanic white were more likely to get DXA than were Hispanic and Non-Hispanic Black.

In TCR, 2714 patients did not get treatment for osteoporosis in the first 12 months after AI therapy initiation. 2989 patients did not receive treatment for osteoporosis within 12 months of obtaining their first DXA scan. 1330 patients who did not undergo DXA were not treated for osteoporosis; and 1384 patients who underwent DXA got treated for osteoporosis.

The duration of AI treatment was negatively associated with the risk of fracture. Women who received DXA scan showed 11% lower risk of fracture than those who were not scanned (HR 0.89 (0.83, 0.94).

Conclusions: National guidelines suggest to obtain a DXA and start bisphosphonate therapy in female breast cancer patients who are treated with AI therapy. Our data suggests that the majority of women in the TCR and SEER database were not treated for osteoporosis within the first 12 months after initiation of AI therapy. Women who received DXA scan showed a lower risk of fracture than those who were not scanned.

References:

[1] National guidelines suggest to obtain a DXA and start bisphosphonate therapy in female breast cancer patients who are treated with AI therapy. Our data suggests that the majority of women in the TCR and SEER database were not treated for osteoporosis within the first 12 months after initiation of AI therapy. Women who received DXA scan showed a lower risk of fracture than those who were not scanned.

Disclosure of Interest: None declared

FRI0533   **INCIDENCE AND RISK FACTORS OF OSTEOPOROTIC FRACTURE IN PATIENTS WITH RHEUMATOID ARTHRITIS: A MULTICENTER COMPARATIVE STUDY OF THE FRAX CRITERIA AND WHO CRITERIA**

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Background: The fracture risk assessment tool (FRAX) criteria and the bone mineral density (BMD) criteria of the World Health Organization (WHO) are widely used for the assessment of osteoporotic fracture. Rheumatoid arthritis (RA) is the only disease parameter for the evaluation of osteoporotic fracture in the FRAX model, unlike the WHO criteria. However, the input for RA is just a dichotomous variable in FRAX model.

Objectives: In this study, we evaluated the incidence and risk factors of osteoporotic fracture in patients with RA through the comparison of the FRAX criteria and WHO criteria.

Methods: This study is a multicenter study, including 479 RA patients in 5 hospitals and 384 healthy controls, between January 2012 and December 2016. All of the RA patients fulfilled the 1987 American College of Rheumatology (ACR) criteria or the 2010 ACR/European League Against Rheumatism (EULAR) criteria for RA. The FRAX criteria for high risk of osteoporotic fracture, which is a 10-year probability of ≥20% for major osteoporotic fracture or ≥3% for hip fracture, were calculated by the FRAX tool including the BMD values. The classification of osteoporosis, according to WHO criteria were based on T-score ≤ -2.5. We assessed various demographic factors, clinical and laboratory findings of RA, and