

# Direct Oral Anticoagulant Prescribing In Patients With Atrial Fibrillation And Cancer On Hospice Admission

HSD75

Phuong Y Duong PharmD, MBA BCPS,<sup>1</sup> Emily K. Short BA BS,<sup>1</sup> Jennifer Tjia, MD MSCE,<sup>2</sup> Matthew Alcusky, PharmD PhD,<sup>2</sup> Mary Lynn McPherson, PharmD PhD,<sup>3</sup> Jon P. Furuno PhD<sup>1</sup>

1. Oregon State University College of Pharmacy, Portland, OR; 2. UMass Chan Medical School, Worcester, MA; 3. University of Maryland School of Pharmacy, Baltimore, MD



Oregon State University  
College of Pharmacy

## Background

- Cancer is prevalent at end-of-life and known to increase risks of ischemic and bleeding events
- Although risk of ischemic and bleeding events are differential by cancer type, it is unknown whether this influences anticoagulant prescribing decisions in hospice patients (i.e., individuals with terminal illnesses and prognosis <6 months)
- We quantified differences in the odds of direct oral anticoagulant (DOAC) prescribing by cancer type among patients with atrial fibrillation (AF)

## Methods

- Cross-sectional study of adults (age ≥ 18) with AF who died at a large, for-profit hospice chain between Jan 1, 2017 and Dec 31, 2019
- Data were abstracted from patients' electronic health records
- We used multivariable logistic regression (STATA-SE v19, significance level=0.05) and results are reported as adjusted odds ratios and 95% confidence intervals (CIs)

## Results

- Among 13,233 hospice decedents with AF, 4,060 (30.7%) had at least one type of cancer on hospice admission
- After adjusting for age, ethnicity, hospice care and referral locations, US census region, diagnosis on admission, PPS, CHA<sub>2</sub>DS<sub>2</sub>-VASc, and HAS-BLED scores, multivariable logistic regression suggested only pancreatic cancer (vs those without) was significantly associated with receiving a DOAC prescription (Table 2)

Table 1: Characteristics of hospice decedents on hospice admission (n = 13,233)

Characteristics	n (%)
<b>Age (years); mean (SD)</b>	84.2 (9.9)
<b>Male sex</b>	6,140 (46.4)
<b>LOS in days; median (IQR)</b>	7 (2 – 31)
<b>Race</b>	
White	8,613 (65.1)
Black	1,281 (9.7)
<b>Hispanic ethnicity</b>	796 (6.0)
<b>Hospice referral location*</b>	
Hospital	7,422 (56.1)
Nursing home/Assisted living facility	3,304 (24.9)
Community	2,440 (18.4)
<b>Hospice location*</b>	
Inpatient	4,662 (35.2)
Home	3,486 (26.3)
Nursing home/Assisted living facility	3,369 (25.5)
<b>Census region</b>	
South	6,218 (47.0)
Midwest	3,631 (27.4)
Northeast	1,695 (12.8)
West	1,689 (12.8)
<b>PPS score (%)</b>	
<20	2,945 (22.3)
20-30	6,853 (51.8)
40-50	3,339 (25.2)
60-100	96 (0.7)
<b>CHA<sub>2</sub>DS<sub>2</sub>-VASc; mean (SD)</b>	
Female	4.8 (1.3)
Male	3.8 (1.4)
<b>HAS-BLED; mean (SD)</b>	2.2 (1.0)
<b>Primary diagnoses*</b>	
Cardiovascular diseases	5,686 (42.9)
Respiratory disease	1,555 (11.7)
Dementia	824 (6.2)
<b>DOAC prescription</b>	1,109 (8.4)

SD: standard deviation; LOS: length of hospice stay; IQR: interquartile range; PPS: Palliative Performance Scale; DOAC: direct oral anticoagulant  
\* Only the most prevalent results are shown

Table 2: Multivariable logistic regression on DOAC prescription with cancer diagnosis on hospice admission

Cancer type*	n (%)	Adjusted OR (95% CI)
<b>Lung cancer</b>	991 (7.5)	1.16 (0.90 – 1.51)
<b>Liver cancer</b>	513 (3.9)	0.73 (0.50 – 1.06)
<b>Breast cancer</b>	496 (3.8)	1.29 (0.95 – 1.76)
<b>Prostate cancer</b>	487 (3.7)	1.05 (0.72 – 1.53)
<b>Bone cancer</b>	466 (3.5)	1.02 (0.70 – 1.49)
<b>Hematologic cancer</b>	453 (3.4)	0.91 (0.63 – 1.31)
<b>Colorectal cancer</b>	378 (2.9)	0.77 (0.50 – 1.18)
<b>Skin cancer</b>	306 (2.3)	0.89 (0.58 – 1.37)
<b>Bladder cancer</b>	276 (2.1)	0.66 (0.39 – 1.12)
<b>Pancreatic cancer</b>	153 (1.2)	<b>2.02 (1.24 – 3.30)</b>
<b>Head &amp; neck cancer</b>	85 (0.6)	0.95 (0.42 – 2.13)
<b>Kidney cancer</b>	79 (0.6)	0.72 (0.28 – 1.83)
<b>Gastric cancer</b>	45 (0.3)	0.98 (0.34 – 2.84)
<b>Other cancers</b>	1,318 (10.0)	0.79 (0.63 – 1.00)

OR: odds ratio; CI: confidence interval

\*Reference groups are patients without the specific type of cancer. Model was adjusted for all types of cancer, patient demographic, and hospice admission characteristics

## Conclusions

- Only pancreatic cancer was significantly associated with higher odds of DOAC prescribing on hospice admission
- Future studies are needed to assess the appropriateness of anticoagulant use in hospice patients with cancer

For more information: Phuong Duong | duongph@ohsu.edu