

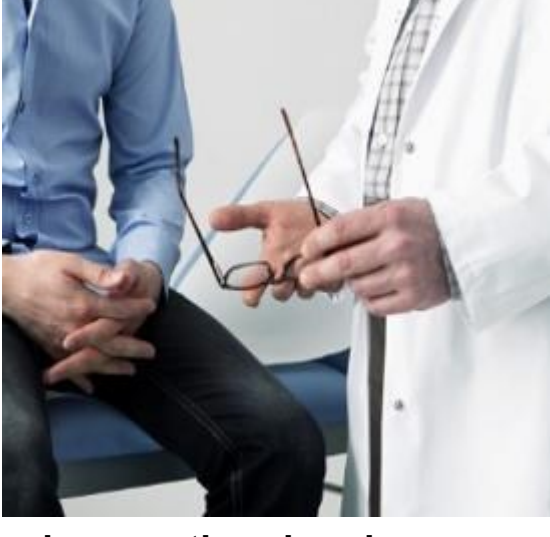
# Value Added

The quarterly newsletter of the CVCR

## Prostate Cancer Screening in Primary Care

October 2017

Since 2008 when the United States Preventive Services Task Force (USPSTF) recommended against prostate cancer (PCa) screening with the prostate specific antigen (PSA) test in men > 75 years of age, guideline recommendations regarding PCa screening have continued to evolve. In 2012, the USPSTF extended the recommendation against screening with PSA to men of any age. In 2013, both the American College of Physicians and the American Urologic Association recommended a shared decision making approach to screening for men <70 years of age starting at age 50 (ACP) or age 55 (AUA) for average risk men. The most recent USPSTF draft guideline now recommends a shared decision making approach to PCa screening for men ages 55-69. Dr. Anita Misra-Hibert studied prostate cancer screening practices in primary care in the Cleveland Clinic Health System from 2007-2014 and is currently testing a tool to help providers to have conversations about PCa screening in busy clinical practice settings.



### Why did you choose to study prostate cancer screening practices in primary care?

*As a primary care physician, I felt the evolving guidelines regarding PCa screening with the PSA test caused confusion and also found, in talking to my colleagues, that there seemed to be significant variation in screening practices, with some providers completely discontinuing screening after the 2012 USPSTF guidelines and others continuing to screen patients. Some of my patients would request screening which would lead to discussion of the risks and benefits while others were not aware that a discussion may need to occur. I remember being at a research conference a few years ago where a study if PCa screening conversations was presented which prompted me to start to study what was actually happening in our practices. I thought the first step was to assess current screening patterns, then to create an intervention to improve our conversations around this topic.*

### What did you learn?

*We learned that in 160, 211 men > age 40 who had at least one visit with a primary care physician in our health system, annual PSA screening testing declined in all age groups in our primary care practices from 2007-2014. This included men >= age 70 who should not be routinely screened based on current recommendations, but also men ages 50-69, with screening rates decreasing from 39% to 20% in this time frame. This age group may be the one to benefit from a shared decision making approach, as is now recommended. Follow-up screening rates were also not related to the previous PSA level, as is also currently suggested.*

### What surprised you the most?

*We found significant variation among providers in the use of PSA testing, ranging from 0% to 50-60% over the study period. While this was not entirely unexpected from my original hypothesis, the variation was wider than I had perceived in practice.*

### How will your research impact care at the Cleveland Clinic?

*Establishing current practice patterns with this initial study has been important in planning to implement interventions to promote a shared decision making approach to PCa screening in primary care. We are currently testing a brief tool that can help promote PCa screening conversations during an office visit and identify those men who may benefit from more extensive shared decision making regarding PCa screening. In addition, our urology colleagues are working on additional tools that we may be able to use in primary care to help improve the PCa screening decision-making process. With the use of these types of tools, we may see less provider variation in screening practices, and will incorporate patient preferences in the screening decision.*

### What are the obstacles?

*Structuring our care delivery systems to allow time and space to allow these important cancer screening conversations to occur remains a challenge. As we look to the future of primary care, implementation of these types of discussions for our patients will require innovative, possibly patient-facing tools, or opportunities to have these conversations outside of the traditional primary care office visit.*

### Featured Publication

**Annals of Internal Medicine®**

[Prevalence of Elevated Cardiovascular Risks in Young Adults: A Cross-sectional Analysis of National Health and Nutrition Examination Surveys.](#)

Krishna K. Patel, MD; Glen B. Taksler, PhD; Bo Hu, PhD; Michael B. Rothberg, MD, MPH

### CVCR Celebrations

#### CVCR students win 1<sup>st</sup> and 2<sup>nd</sup> place Bumpus Award prizes

Congratulations to Isabel Janney and Aditi Patel for winning the 1<sup>st</sup> and 2<sup>nd</sup> place prizes for 2017 F. Merlin Bumpus Award for Clinical Research. Ms. Janney is a Case Medical student who worked with investigators at the CVCR on her study, "The impact of systematic depression screening on depression identification and treatment in a large health care system." Dr. Aditi Patel is a resident who won second prize for her study, *Understanding treatment decisions for upper respiratory tract infections*. The Bumpus award highlights excellence in research by graduate students and postdoctoral fellows affiliated with Cleveland Clinic. Parth Parikh, a medical resident working with CVCR was selected as a runner up.

#### Society for Medical Decision Making Young Investigator Award

Phuc Le, PhD, was awarded The Young Investigator Award for her paper [Determining the Optimal Vaccination Schedule for Herpes Zoster: A Cost-Effectiveness Analysis](#), *Journal of General Internal Medicine* 2016. The Young Investigator Award is presented annually for the best paper published by a trainee or junior faculty member.

#### NIH/National Institute on Aging R21 Grant

PI: Glen Taksler, PhD

Title: *Individualizing Disease Prevention for Middle-Aged Adults*

Funding Source: NIH/National Institute on Aging

Grant Type: R21

Award Period: 09/01/2017-03/31/2019

Total Award Amount: \$456,614

Project Goal: "Individualizing Disease Prevention for Middle-Aged Adults" will help middle-aged adults to make an informed decision about the handful of health care services that are most likely to promote longevity. We will employ a previously-published analytic model to learn how to communicate the net benefits of all major preventive care services, individualized for a patient's age and risk factors, and build a web-based portal. We will pilot test the framework with middle-aged adults.

### Featured study-in-progress:

## Reducing Harm from Venous Thromboembolism Using a Patient-Centered Approach

**Principal Investigator:** Michael Rothberg, MD, MPH

**Co-Investigators:** Aaron Hamilton, MD, Bo Hu, PhD, Phuc Le, PhD, Lei Kou, Michael Kattan, PhD.

**The Problem:** Venous thromboembolism (VTE) is a serious source of morbidity and mortality for hospitalized medical patients. Chemoprophylaxis with heparin has been shown to reduce the occurrence of VTE, but it increases the risk of bleeding and it is uncomfortable to receive. For that reason, VTE prophylaxis should be reserved for medical patients at moderate to high risk of VTE and low risk of bleeding. However, identifying patients at low risk for VTE can be difficult, because most patients have at least one risk factor for VTE and there are no validated risk prediction tools for use in US hospitals.

### A Potential Solution:

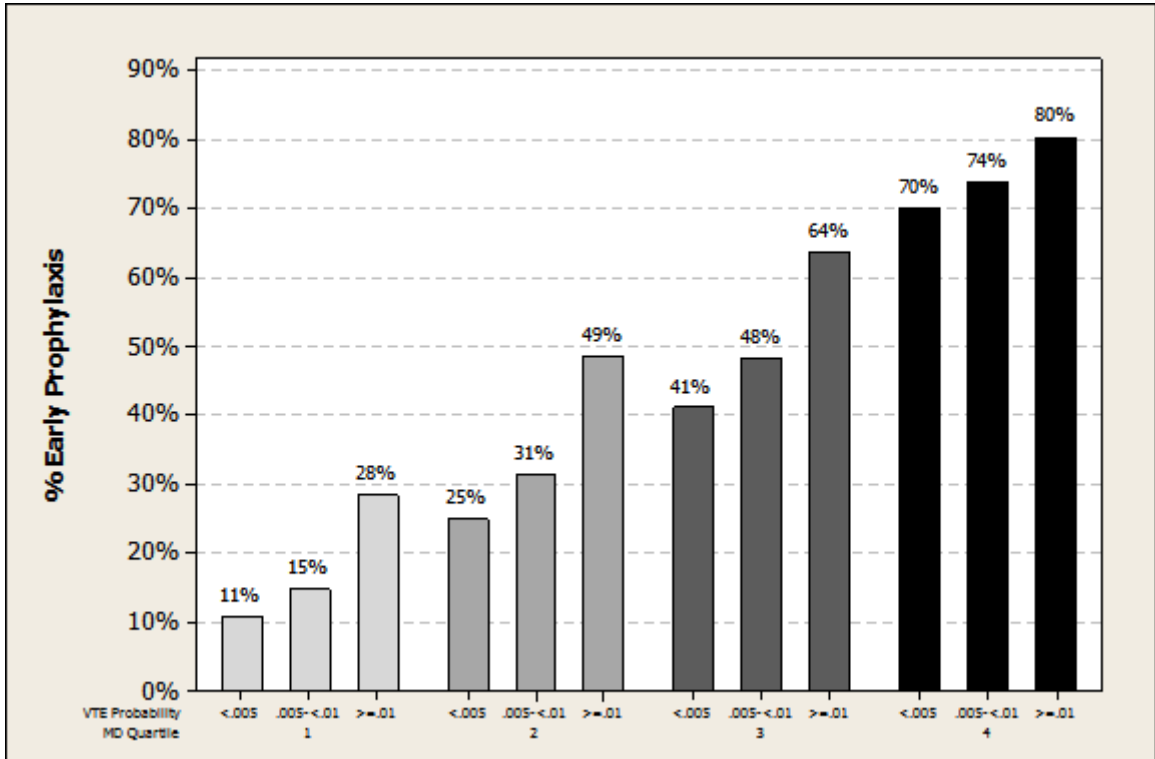
Using EHR data from 5 years of medical patients hospitalized at the Cleveland Clinic, investigators from CVCR working with statisticians from QHS have derived a risk prediction model which can identify patients at moderate to high risk of VTE. Using an in-hospital VTE threshold of 0.25%, we discovered that by limiting prophylaxis only to patients above this threshold, we could safely reduce the amount of prophylaxis by almost 70%. The next step is to test this hypothesis prospectively with a randomized trial.

### The Randomized Trial:

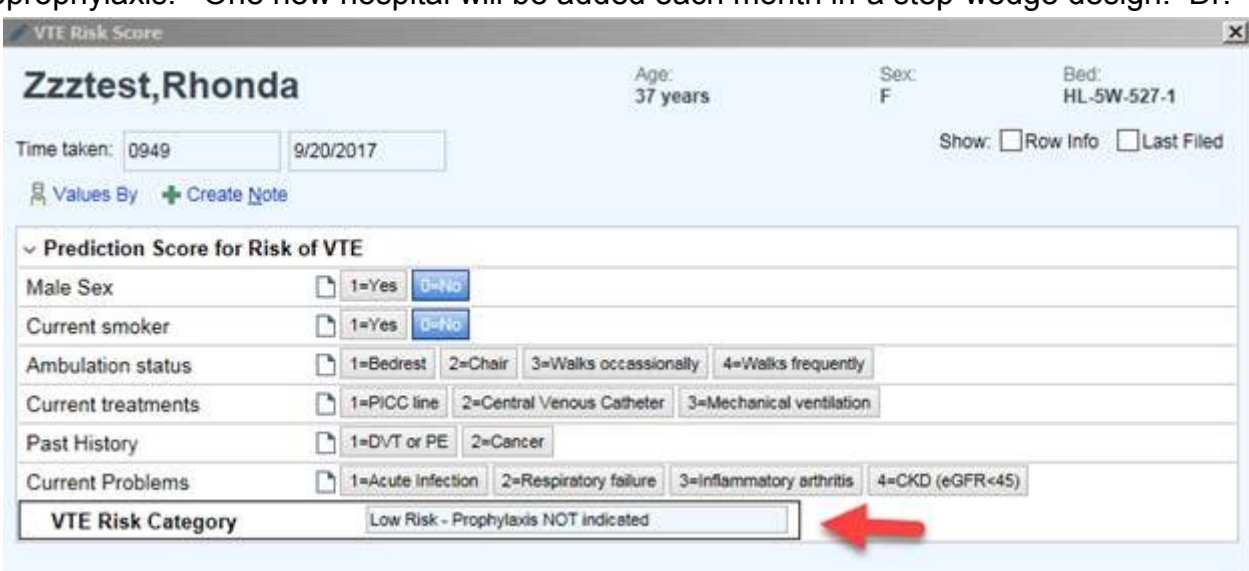
Beginning in November, physicians at Medina will begin to see a VTE risk calculator embedded in the admission order set. The calculator, integrated into Epic by Daniel Hettinger of the Clinical Systems Office, will be pre-populated with some risk factors that can be extracted electronically. Physicians can then click on additional risk factors, and the calculator will determine whether the patient is high enough risk to warrant chemoprophylaxis. One new hospital will be added each month in a step-wedge design. Dr. Aaron Hamilton will be leading the educational effort to encourage our hospitalists to use the new calculator. At the end of one year, we will compare rates of prophylaxis, VTE, and bleeding events during periods before and after the calculator was implemented at each of the sites. The study is funded by the Agency for Healthcare Research and Quality.

### Potential Implications:

As the Cleveland Clinic moves toward a value-based approach to care, it is no longer enough to provide the same care to everyone, regardless of risk. Personalizing care based on specific risk factors should allow us to target those patients who will benefit the most from an intervention, while avoiding cost and complications among low risk patients who have little to gain. Using point-of-care decision support embedded in the EHR promises to improve care at minimal cost. If this study is successful, it can be generalized to other US hospitals.



Previous study of US hospitals shows that prescribing of VTE prophylaxis is more dependent on the physician than on the patient's risk. Within quartiles of overall prescribing rate, physicians did not differentiate much between patients at high vs. low risk of VTE.



New Risk Calculator to be Used in Randomized Trial of VTE Prophylaxis in Medical Patients

## Recent Publications

[Thromboembolic and Major Bleeding Events With Rivaroxaban Versus Warfarin Use in a Real-World Setting.](#) Russo-Alvarez G, Martinez KA, Valente M, Bena J, Hu B, Luxenburg J, Chaitoff A, Ituarte C, Brateanu A, Rothberg MB.

[Are Providers Prepared to Engage Younger Women in Shared Decision-Making for Mammography?](#) Martinez KA, Deshpande A, Ruff AL, Bolen SD, Teng K, Rothberg MB.

[Practical Approaches for Assessment of Daily and Post-discharge Room Disinfection in Healthcare Facilities.](#) Deshpande A, Donskey CJ.

[Are hospital floors an underappreciated reservoir for transmission of health care-associated pathogens?](#) Deshpande A, Cadnum JL, Fertelli D, Sitzlar B, Thota P, Mana TS, Jencson A, Alhmidy H, Koganti S, Donskey CJ.

[Accuracy of Cardiovascular Risk Prediction Varies by Neighborhood Socioeconomic Position: A Retrospective Cohort Study.](#) Dalton JE, Perzynski AT, Zidar DA, Rothberg MB, Coulton CJ, Milinovich AT, Einstadter D, Karichu JK, Dawson NV.

[The association between insurance type and cost-related delay in care: a survey.](#) Al Rowas S, Rothberg MB, Johnson B, Miller J, AlMahmoud M, Friderici J, Goff SL, Lagu T.