WELCOME

CANADIAN VASCULAR QUALITY INITIATIVE

April 4, 2024
3-6 PM CT
Winnipeg, Canada
Hybrid

SVS | VQI
In collaboration with NCDR®

Attendance

In-person:

- Scan the QR code to record your attendance

Remote:

- First AND Last name required
- Do NOT scan the QR code
- Sharing a computer or have questions? Email Angela Churilla at achurilla@svspso.org

Appreciation and Thanks

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Thank you to everyone who helped make this event possible:

Yaasin Abdulrehman, MD - Regional Medical Director
Kenton Rommens, MD - Regional Associate Medical Director
Naomi Eisenberg - Regional Lead Data Manager
Kaity Sullivan – SVS PSO Analytics Team
Angela Churilla– SVS PSO Education & Quality Manager
Jennifer Correa – Marketing Manager
SVS PSO Staff

Today's Agenda

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3:00 pm	Welcome	No Credit
3:05 pm	Regional Data Review – Yaasin Abdulrehman, MD and Kenton Rommens, MD, (Regional) Medical Directors Learning Objectives: • Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process). • Interpret and compare each centers' VQI results to regional and national benchmarked data. • Learn, through group discussion the VQI regional results to improve the quality of vascular health care by monitoring measurable performance indicators, SVS PSO evidence-based research, and outcomes. • Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients. Sharing of best practices/pathways of care.	CE Credit
4:05 pm	Regional QI Proposal – Yaasin Abdulrehman, MD and Kenton Rommens, MD, (Regional) Medical Directors Learning Objectives: • Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process). • Interpret and compare each centers' VQI results to regional and national benchmarked data. • Learn, through group discussion the VQI regional results to improve the quality of vascular health care by monitoring measurable performance indicators, SVS PSO evidence-based research, and outcomes. • Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients. Sharing of best practices/pathways of care.	CE Credit

Today's Agenda - Continued

5:05 pm	National VQI Update – Caroline Morgan, RN, PSO Clinical Operations Director Learning Objectives: • Use the VQI regional reports to establish quality improvement goals for the vascular patients (outcomes) and for their center (process). • Identify high performing regional vascular centers to discuss variations in care and clinical practice patterns to improve outcomes and prompt quality improvement recommendations for vascular care patients. Sharing of best practices/pathways of care.	CE Credit
5:45pm	Council / Committee Updates	No CE Credit
5:55pm	Open Discussion/Next Meeting/Meeting Evaluation	No CE Credit

Disclosures

Yaasin Abdulrehman, MD
- None

Kenton Rommens, MD
- Consultant: Gore Medical; Terumo Aortic
  - *The financial relationship is not relevant to the content of the educational activity.*

Welcome and Introductions

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Toronto General Hospital
CHUM
CISSSO Outaouais
Covenant Health-Grey Nuns Hospital
CHUM
Hamilton Health Sciences Centre
Hospital Sacre Coeur
Nova Scotia Health
Peter Lougheed Centre
Thunder Bay Regional Health Science Center
Toronto General Hospital
University of British Columbia

Regional Lead Data Manager Update

Naomi Eisenberg

Toronto General Hospital

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Active Regional Charters

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2023 - ***DC Medications***

Halifax Infirmary

Alexa Grant-Gorveatt Min Lee MD – Physician Champion

2023 - ***30 Day Follow Up***

Toronto General Hospital

Naomi Eisenberg Graham Roche- Nagle – Physician Champion

Spring 2024 SVS VQI Regional Report Slides

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The VQI Regional Quality Report is produced semiannually to provide centers and regions targeted, comparative results and benchmarks for a variety of procedures, process measures, and postoperative outcomes.

Please note the following updates have been implemented to enhance and improve the report:

- Ability to Download/Print Dashboard

  The dashboard summary can now be downloaded as an Excel file or printed directly using buttons included above the dashboard table. Please note that printing allows you to save as PDF with the “Print to PDF” feature in your browser.

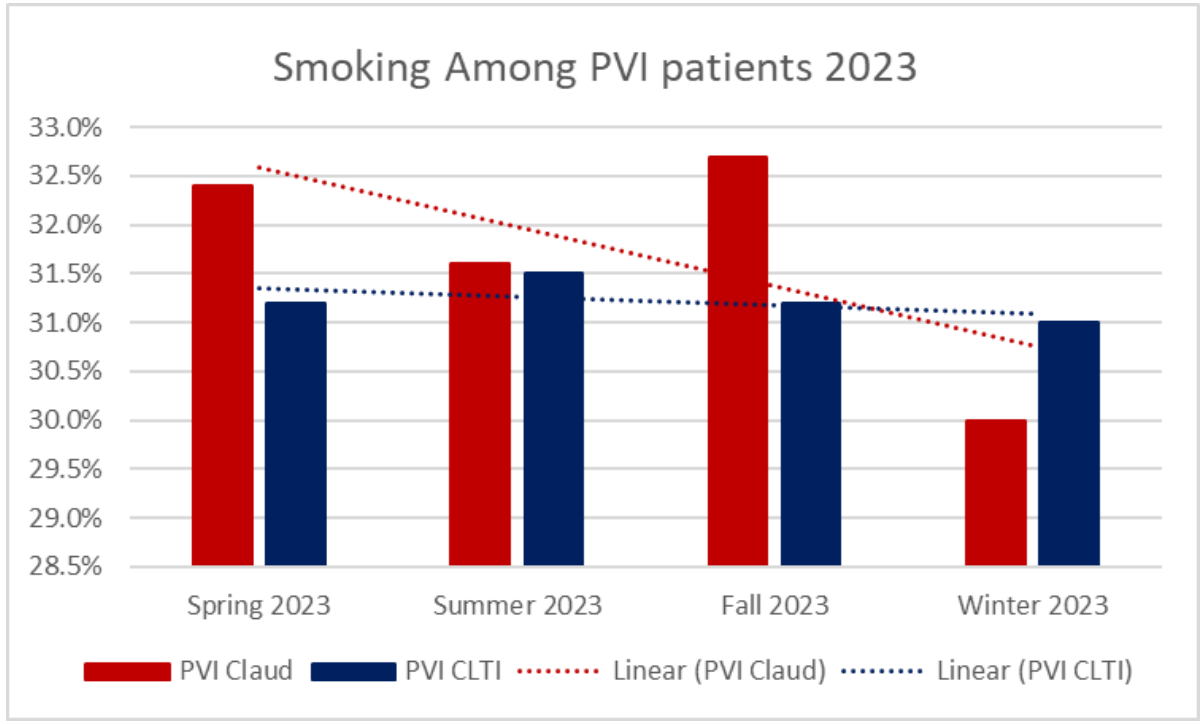
- Interactive Plots

  All graphics are now interactive.

https://www.vqi.org/wp-content/uploads/SPRING_REGIONAL_REPORT_SLIDES_REGION_Canada-rev.html

Ctrl + click to open

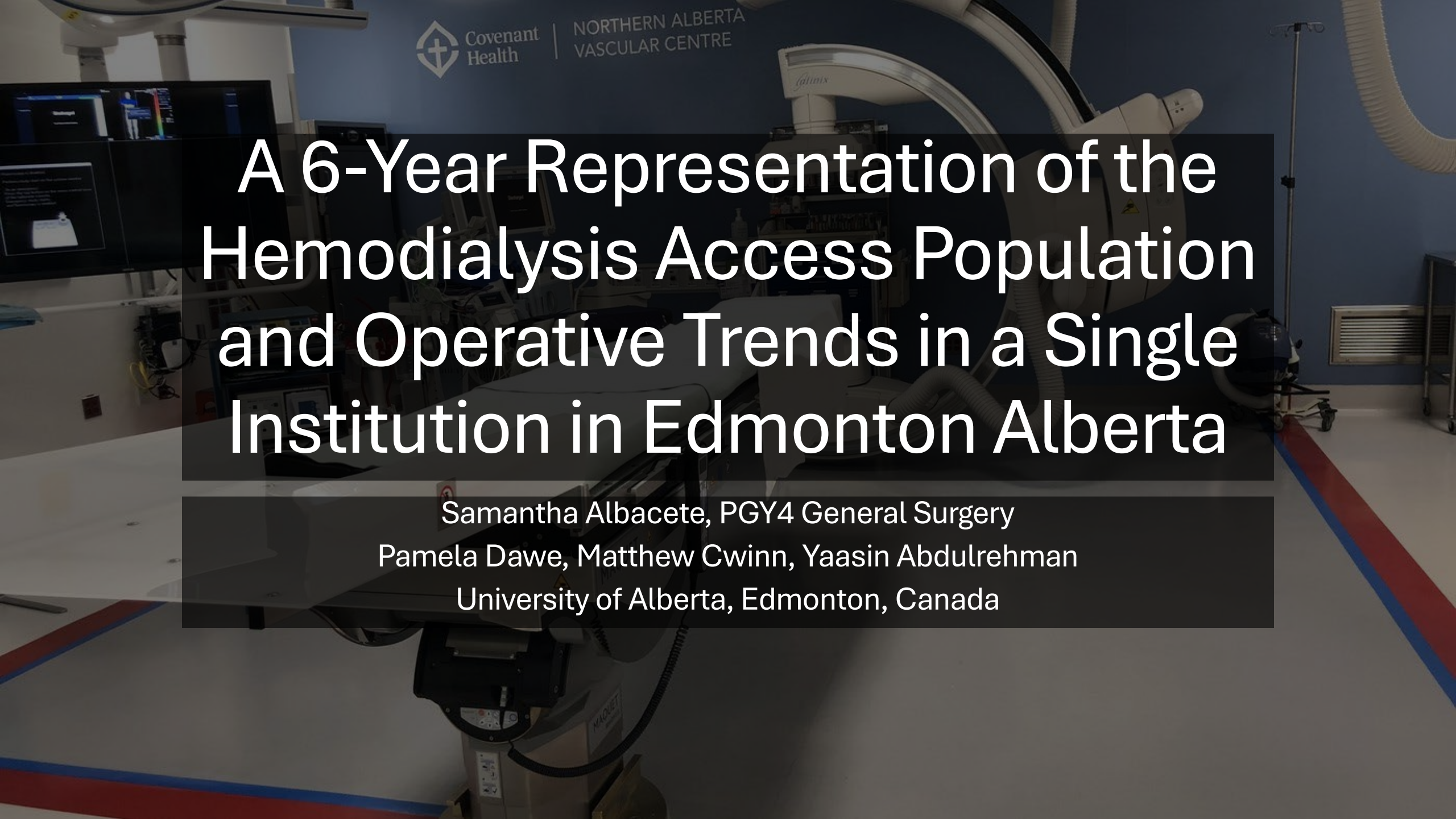
Current Smoking Rates Among Canadian PVI Patients (2023)



	Spring 2023	Summer 2023	Fall 2023	Winter 2023
PVI Claud	32.4%	31.6%	32.7%	30.0%
PVI CLTI	31.2%	31.5%	31.2%	31.0%

Source: CVQI Dashboard Reports 2023

- Toronto Project Data Prelim Results - Naomi



A 6-Year Representation of the Hemodialysis Access Population and Operative Trends in a Single Institution in Edmonton Alberta

Samantha Albacete, PGY4 General Surgery
Pamela Dawe, Matthew Cwinn, Yaasin Abdulrehman
University of Alberta, Edmonton, Canada

Introduction

- Edmonton AB represents a unique opportunity to evaluate this population as the only Canadian center in the VQI database to track vascular access
- How are we doing and how can we improve outcomes?
- Hemodialysis access is essential to a patient's ESRD life plan

Objective

Analyze the unique **characteristics** and **operative trends** at our institution

Our Approach

- **Retrospective** descriptive study
- Gathered data from the **Edmonton** chapter of the VQI database from **2017 - 2022**

Table 1. Characteristics of patients undergoing vascular access procedures from 2017 – 2022, no differences in characteristics across years, N = 966

Sex	(Male)	634	(66%)
CAD	None	732	(76%)
	MI	183	(19%
CHF	None	798	(83%)
	Asymptomatic	109	(11%)
	Mild	37	(4%)
CKD	Stage 5	379	(97%)
Diabetes	None	382	(40%)
	Requiring insulin	427	(44%)
HTN	Yes	882	(91%)
PAD	Asymptomatic	539	(58%)
Smoking Status	Prior or Current	421	(44%)
ASA	Class 3	723	(75%)

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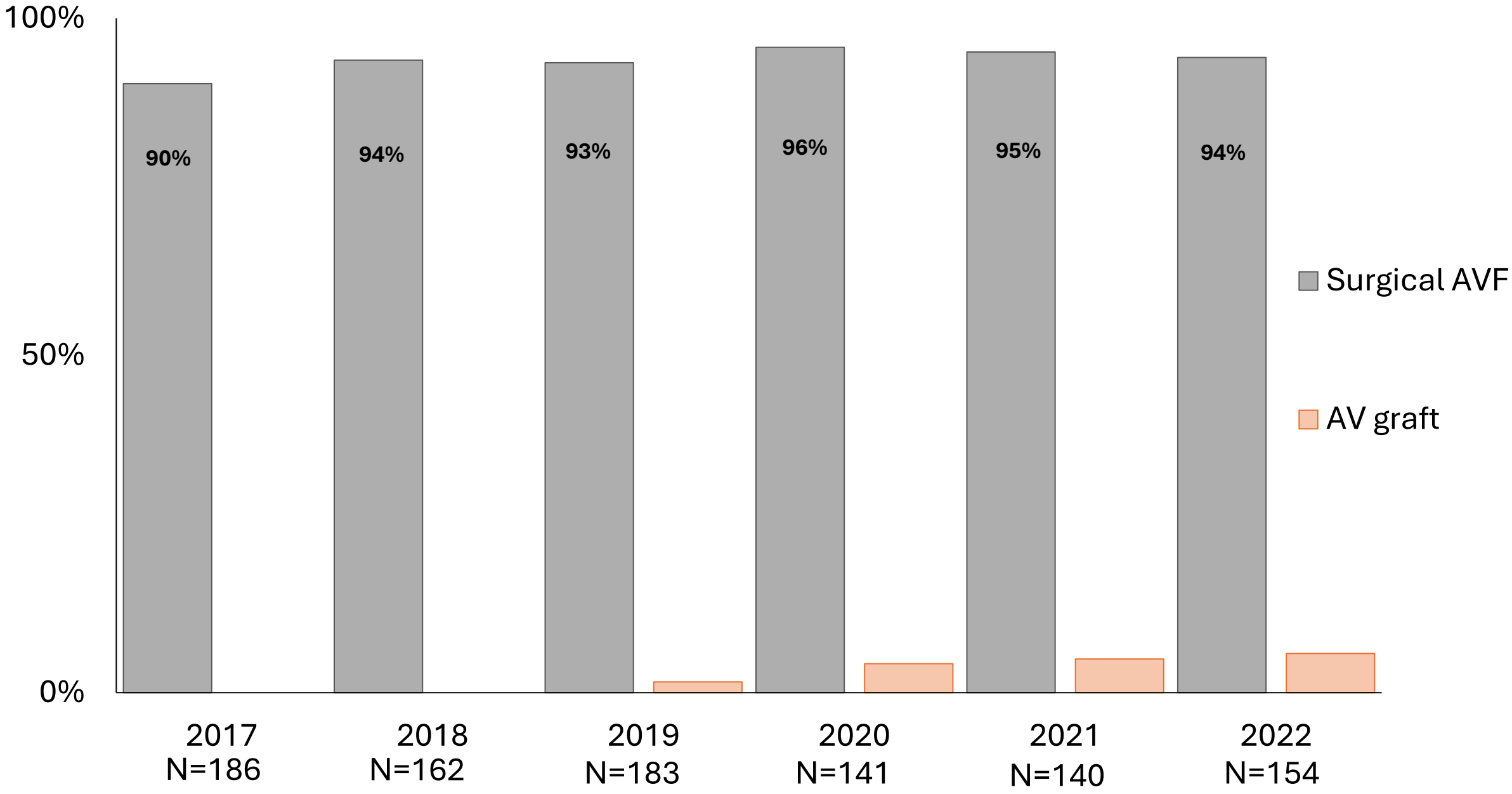

Figure 1. Percentage of patients receiving surgical AVF vs AV grafts by year from 2017 - 2020

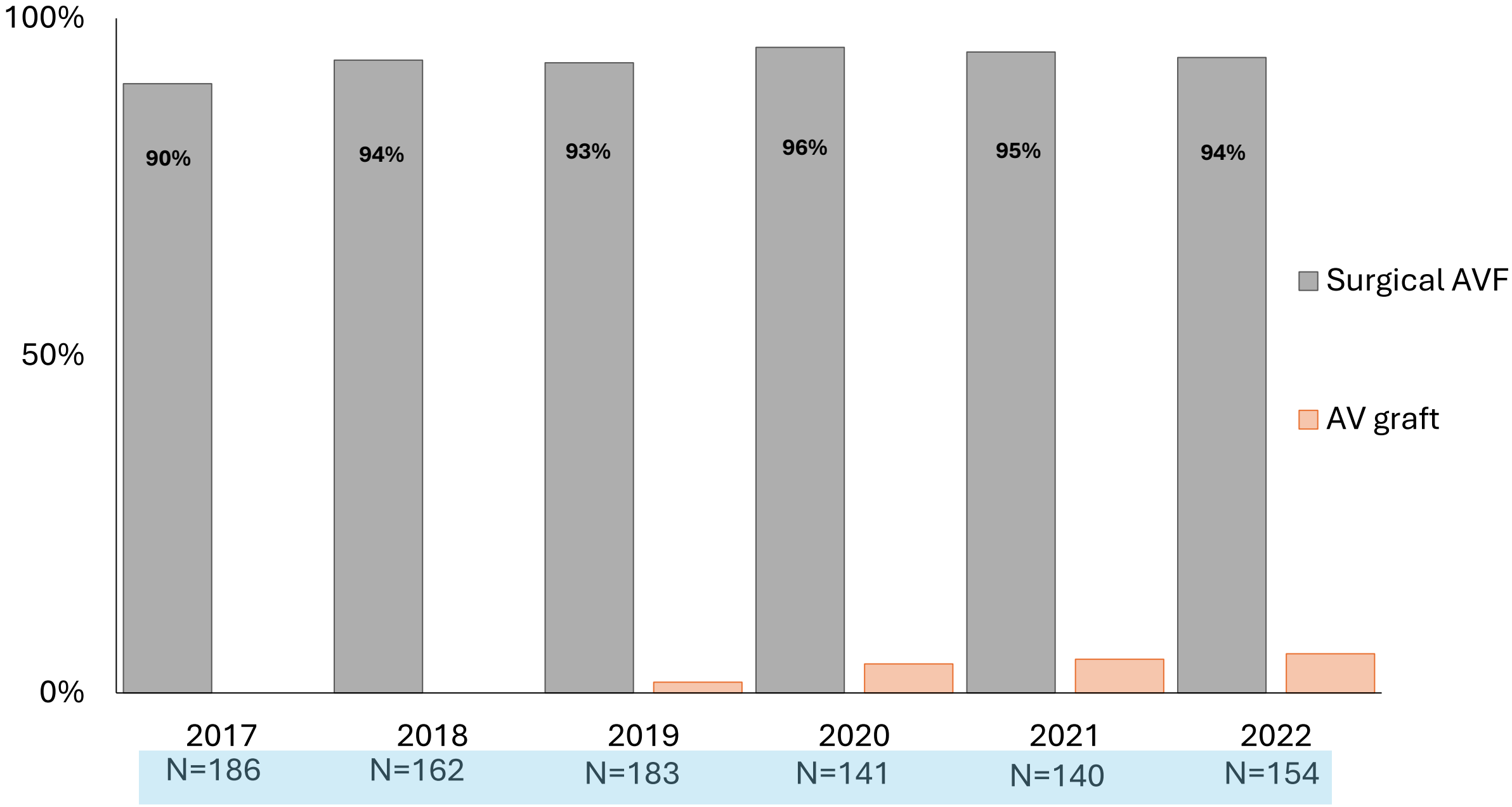

Figure 1. Percentage of patients receiving surgical AVF vs AV grafts by year from 2017 - 2020

Table 2. Select operative variables from 2020 - 2022 for patients undergoing venous access, N=435

		2020 N=141	2021 N=140	2022 N=154
Preoperative US Vein Mapping		91%	85%	99%
Preop Target Vein Diameter (mm)		3.4 ± 1.0	3.4 ± 1.1	3.4 ± 1.4
Inflow Artery	Radial, snuffbox	1%	3%	2%
	Radial, wrist	47%	35%	42%
	Radial, forearm	8%	4%	2%
	Brachial, antecubital	32%	45%	45%
	Brachial, upper arm	6%	6%	5%
	Radial, antecubital	7%	4%	4%
	Radial, high takeoff	0%	2%	0%
Outflow Vein	Cephalic, forearm	57%	48%	49%
	Cephalic, upper arm	33%	40%	39%
	Basilic, forearm	2%	1%	3%
	Basilic, upper arm	5%	6%	5%
	Brachial, upper arm	0%	1%	1%
	Axillary	1%	2%	2%
	Other	2%	1%	1%

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	Other	2%	1%	1%

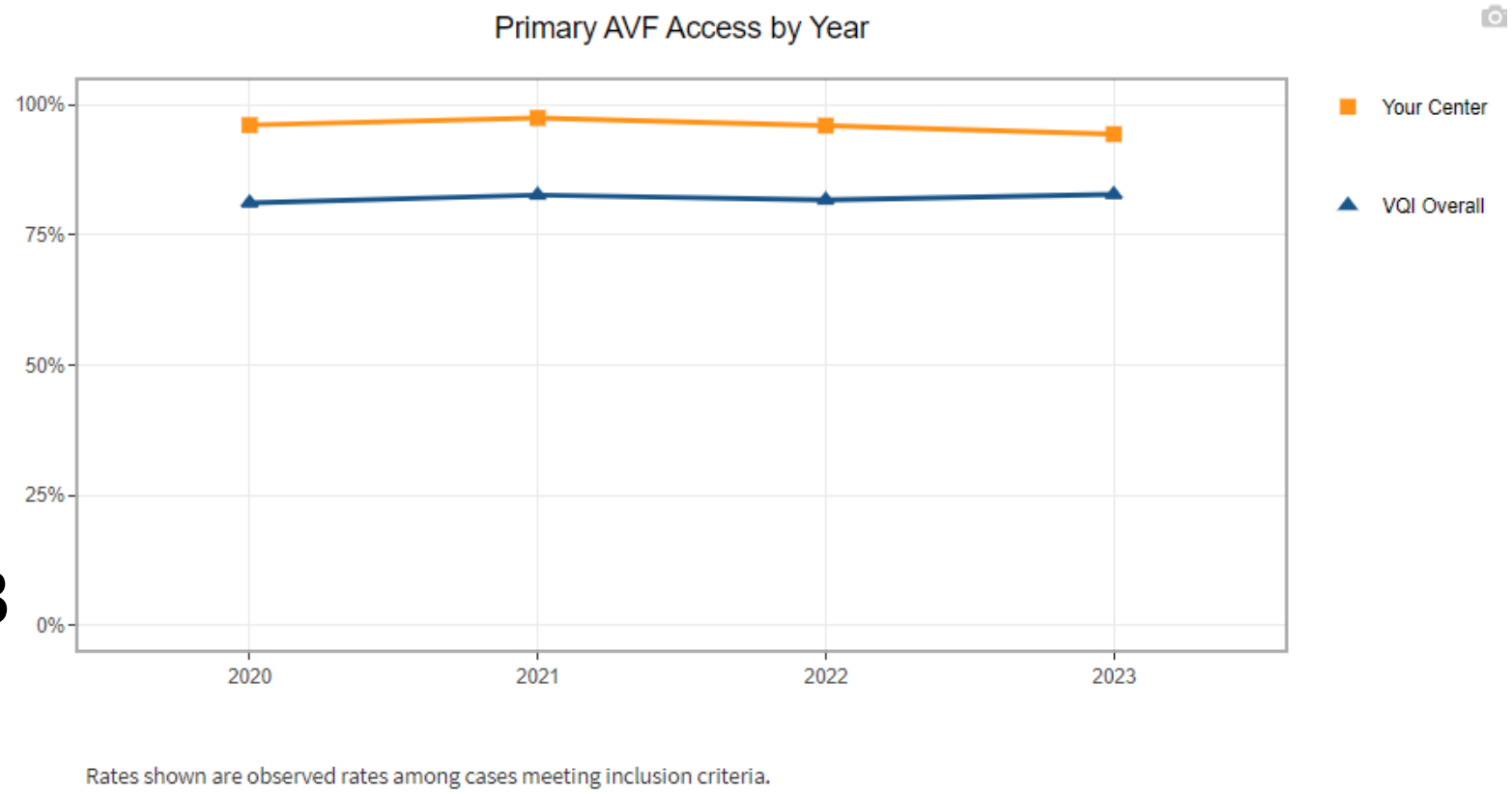
Lots of Data to Unpack

- High volume center
- High rates of AVF vs Grafts
- High rates of US vein mapping

How Do We Compare?

AVF

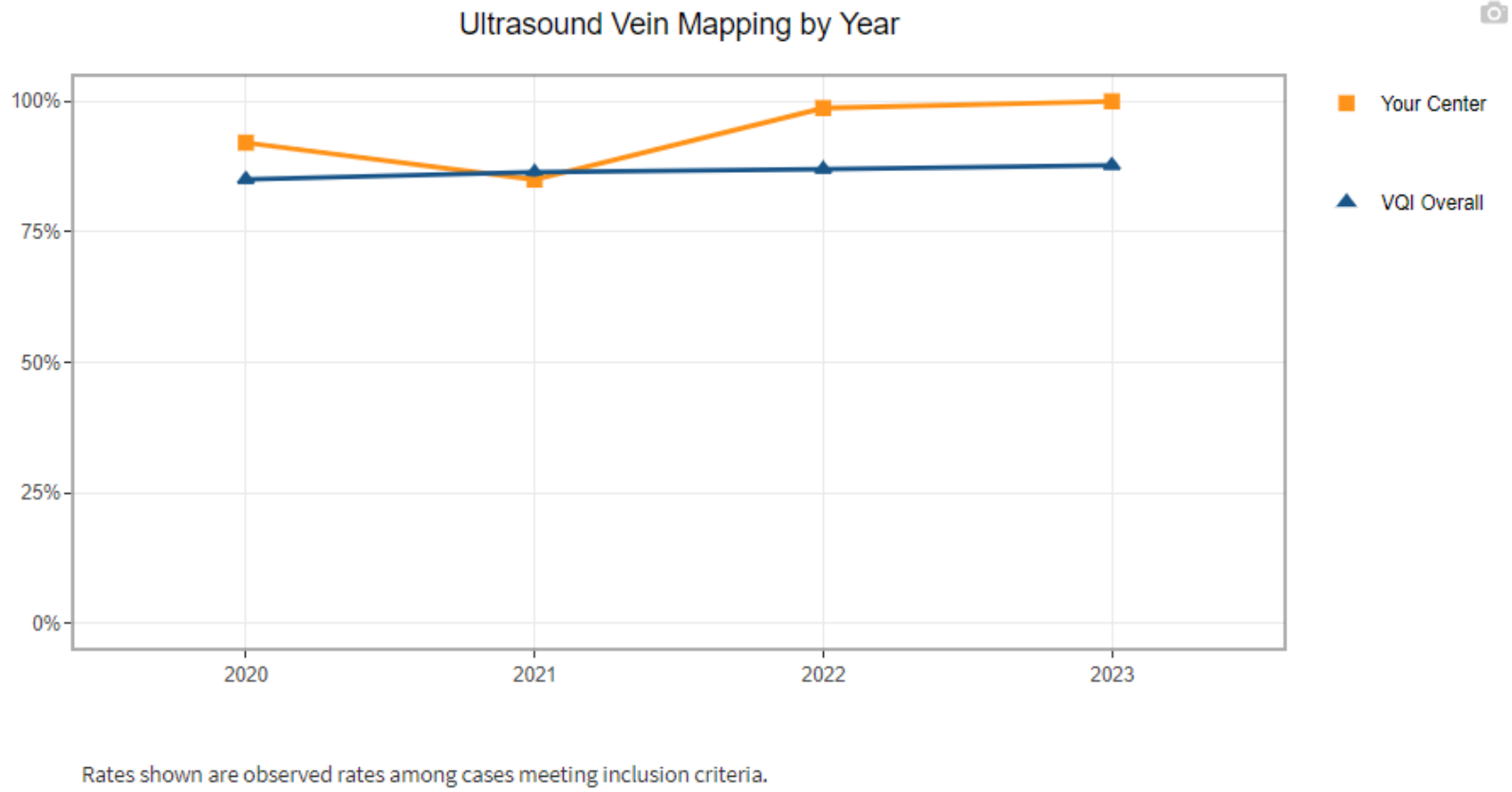
Regional Reports 2023
Unpublished data



How Do We Compare?

US Vein Mapping

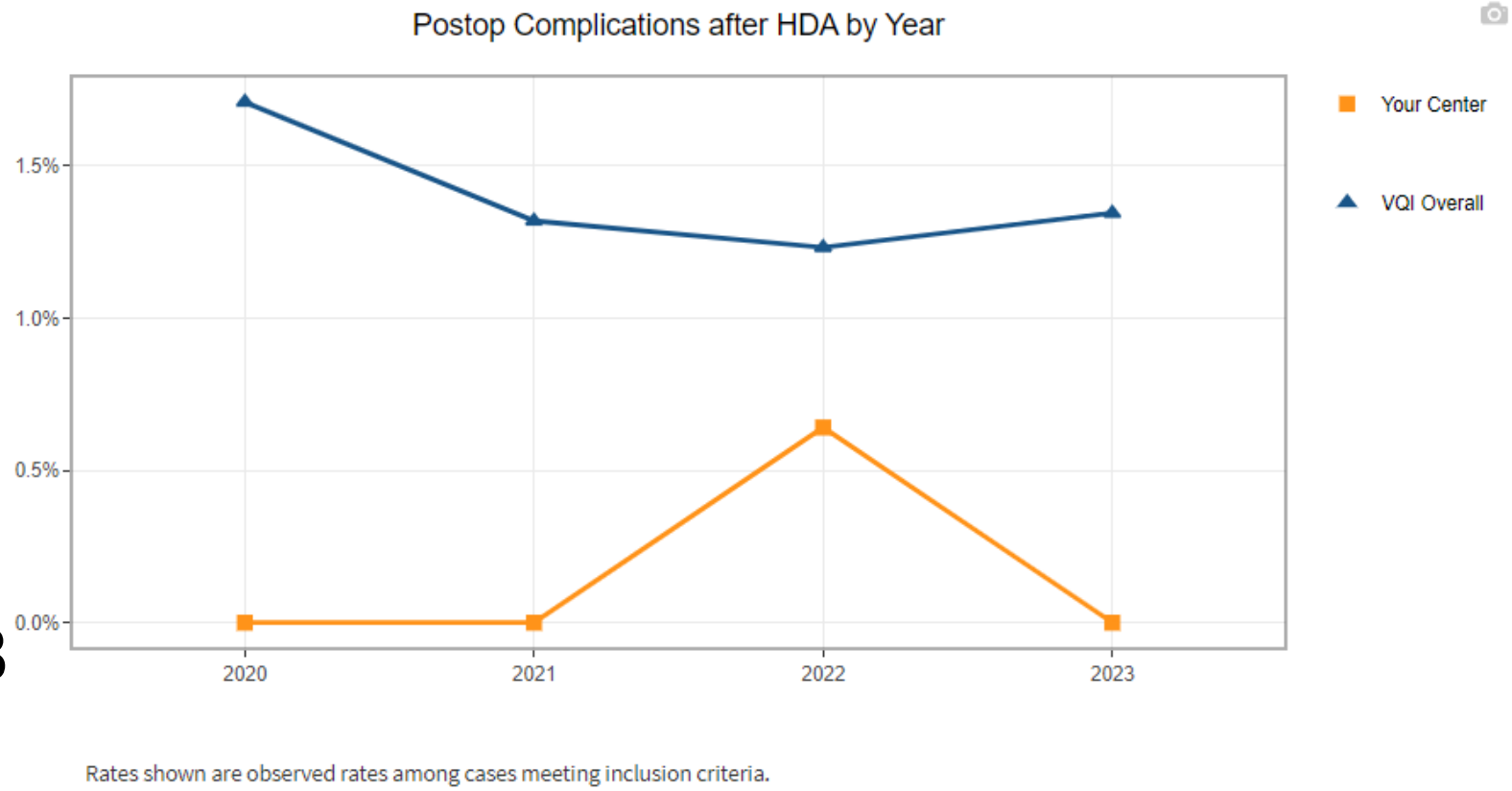
Regional Reports 2023
Unpublished data



How Do We Compare?

Post Operative Complications

Regional Reports 2023
Unpublished data



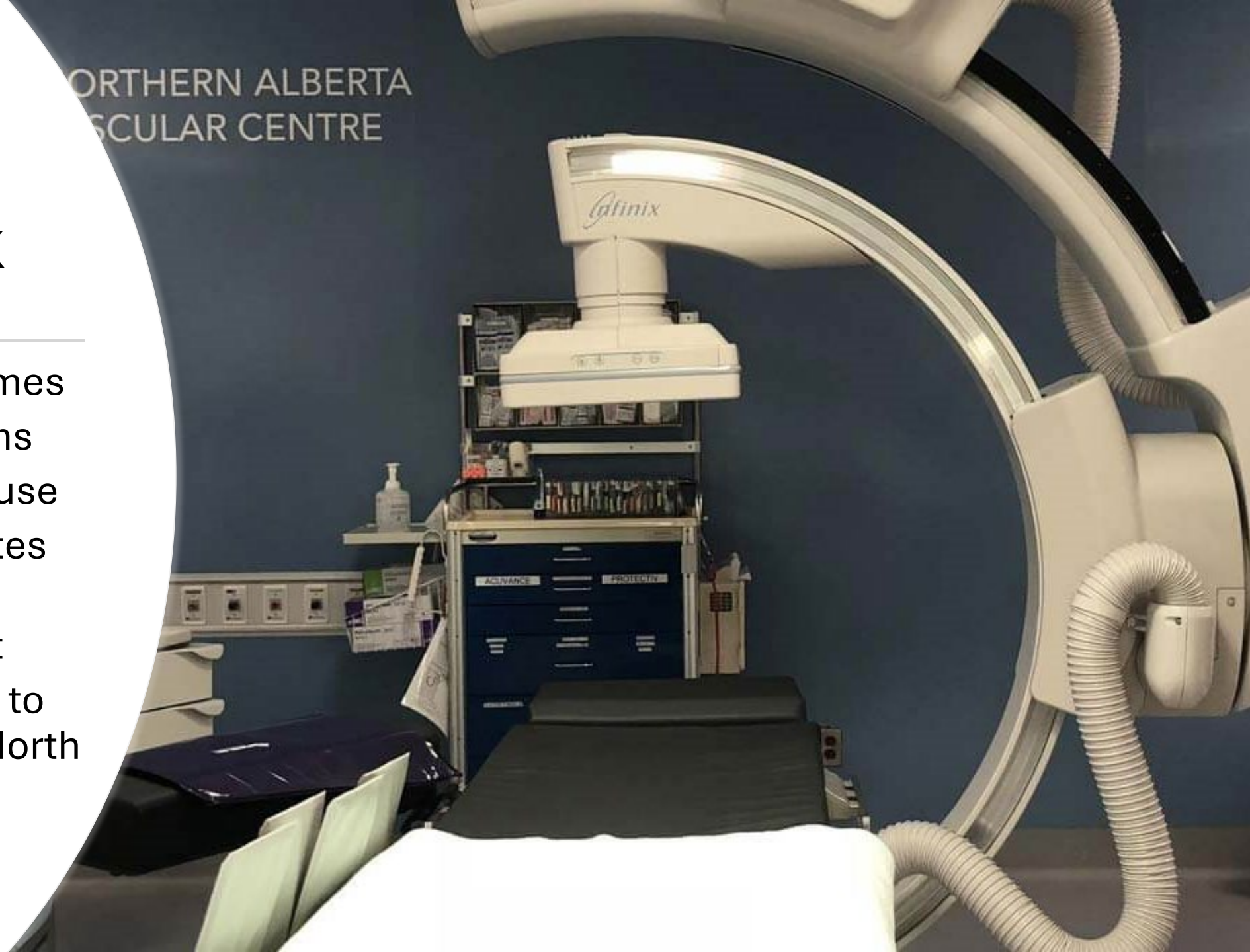
Covenant Health | NORTHERN ALBERTA VASCULAR CENTRE

What does this tell us?

- First stage in analysing Edmonton vascular access population
- Essential going forward → compare our work to others across North America
- Consistency
  - Perform vein mapping
  - Choose autogenous access for arteriovenous vascular access creation
  - In line with KDOQI guidelines

Future Work

- Long-term outcomes
  - Reinterventions
  - time to initial use
  - maturation rates
  - time to abandonment
- How we compare to other centers in North America



Questions?

How Do We Compare?

Association of Preoperative Vein Mapping with HD Access Characteristics and Outcomes in the Vascular Quality Initiative

Journal of Vascular Surgery, April 2022

- Objective: describe current use of preoperative vein mapping and describe association with various HD configurations and outcomes
- Population 46, 010 from 2011 - 2019
- Preoperative vein mapping in 85.6%
- More AVF and forearm in vein mapping cohort

?Preoperative Vein Mapping

No high quality evidence to support this idea

Current (2019) Kidney disease outcomes quality initiative clinical guidelines only recommend preop vein mapping in **select patients**

Table 7.2. Examples of Risk Factors For Which Vessel Mapping May Be Beneficial

Clinical Problem	Risk Factors
Fistula failure	Elderly age, female, comorbidities (eg, peripheral vascular disease, coronary artery disease), small pediatric patients
Peripheral vessel damage	Ipsilateral: PICC insertion, other iatrogenic (eg, venipuncture), self-inflicted (eg, IVDU), disease states (eg, vasculitis), radial artery harvesting for CABG
Central venous stenosis	Multiple CVCs; prolonged CVC duration; cardiac implantable electronic device; PICC; surgery or trauma to neck, chest, upper extremity
Limitations to physical examination	Morbid obesity, suboptimal conditions (eg, patient dehydrated or vasoconstricted), poor skin integrity, patient refusal

Note: When central venous stenosis is suspected, ultrasound has low sensitivity for detecting central vein stenosis, and venogram should be performed when possible to confirm and locate lesions.
Abbreviations: CABG, coronary artery bypass graft; CVC, central venous catheter; IVDU, intravenous drug use; PICC, peripherally inserted catheter central.

AVF vs AVG

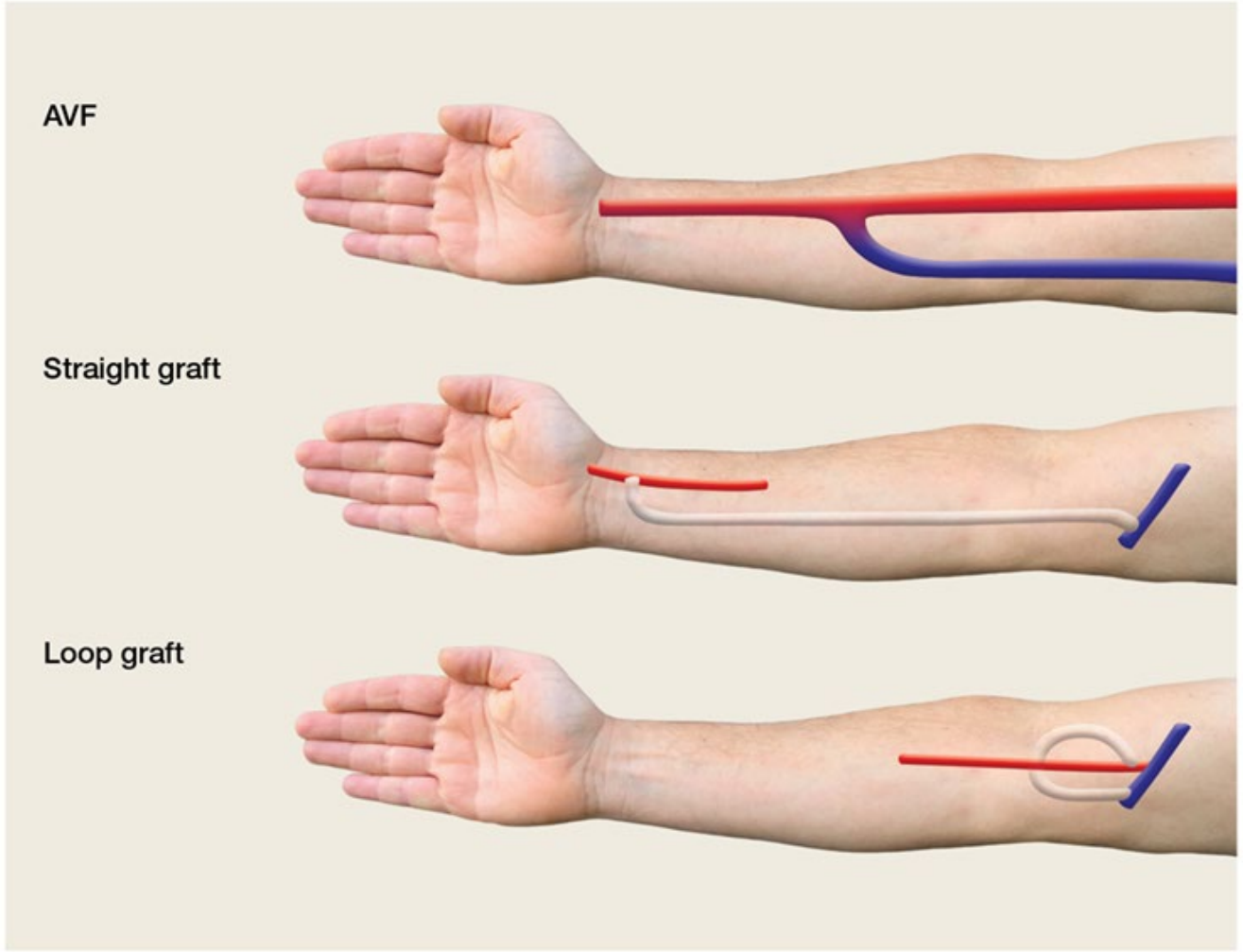


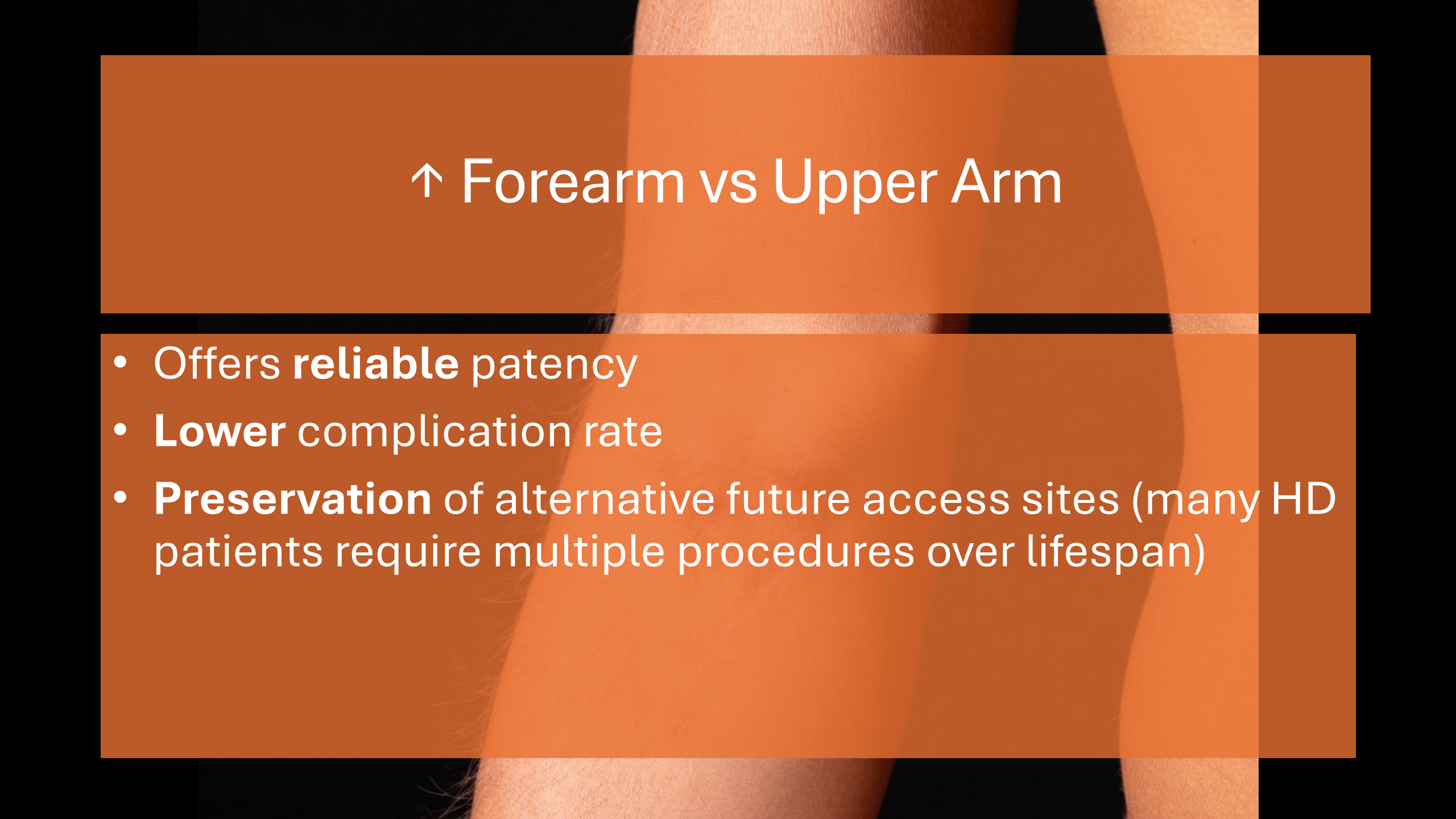
Figure. Schematic of an arteriovenous fistula (AVF) and arteriovenous graft (AVG). The first image demonstrates one type of structure for an AVF while the last two illustrations demonstrate two variations of an AVG structure.

AVF vs AVG vs CVC

- Complications and mortality **lower** with AVF
- KDOQI guidelines suggest relationship between AVF – AVG – CVC not that simple
  - AVF and AVG patency may be **equivalent**
  - **Few RCT** comparing AVF and AVG → some demonstrate superiority of AVG (pts with poor vessels/greater comorbidity)
  - Can **not compare** AVF complications with AVG complications (studies on AVF complications do not include AVFs that fail to mature or are nonusable)

AVF vs AVG

- Historically **AVFs preferred** → lower morbidity/mortality + lower rates infection/thrombosis + fewer reinterventions
- Recent guidelines suggest more **patient centered** approach
- AVFs still most performed procedure



↑ Forearm vs Upper Arm

- Offers **reliable** patency
- **Lower** complication rate
- **Preservation** of alternative future access sites (many HD patients require multiple procedures over lifespan)

Stratification of Endovascular Revascularization Technical Outcomes Using the Global Limb Anatomic Staging System

Subash Subramanian (MD Student, c2025)
Yaasin Abdulrehman MD, FRCSC
Gillian Shiau, MD, FRCPC
Samuel Pike, MD
Pamela Dawe

Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta

CVQI Regional Meeting, April 4, 2024, Winnipeg

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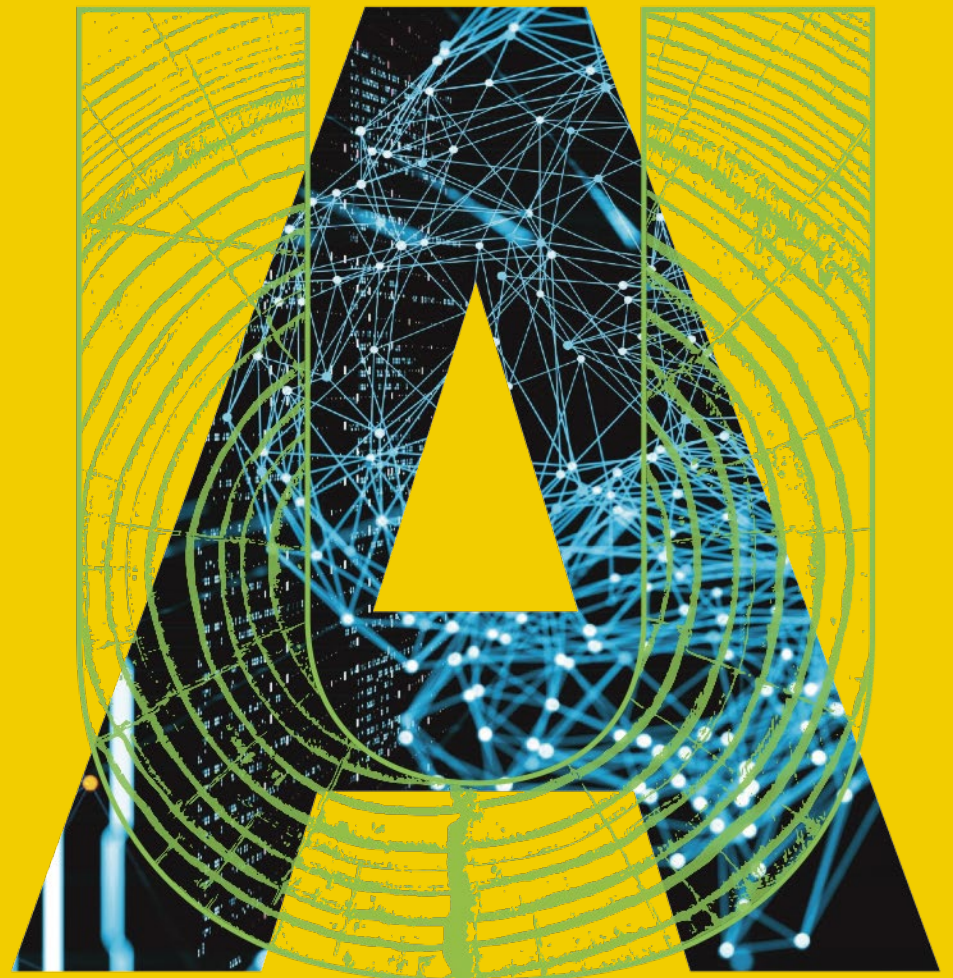


Background: Global Limb Anatomic Staging System

- There is a general lack of understanding between outcomes from revascularization in chronic limb threatening ischemia (CLTI) and patterns of disease
  - Predicting success, hemodynamic improvement and anatomic durability from clinical stage and disease patterns remains elusive
- GLASS is an anatomical scheme developed by the Global Vascular Guidelines in 2019 to support the development of evidence-based revascularization guidelines in CLTI
- GLASS involves defining a preferred target artery path (TAP) and estimating limb-based patency (LBP).
  - Femoropopliteal and infrapopliteal arterial segments are graded on a scale of 0-4 and then combined into three overall GLASS Stages (I-III)

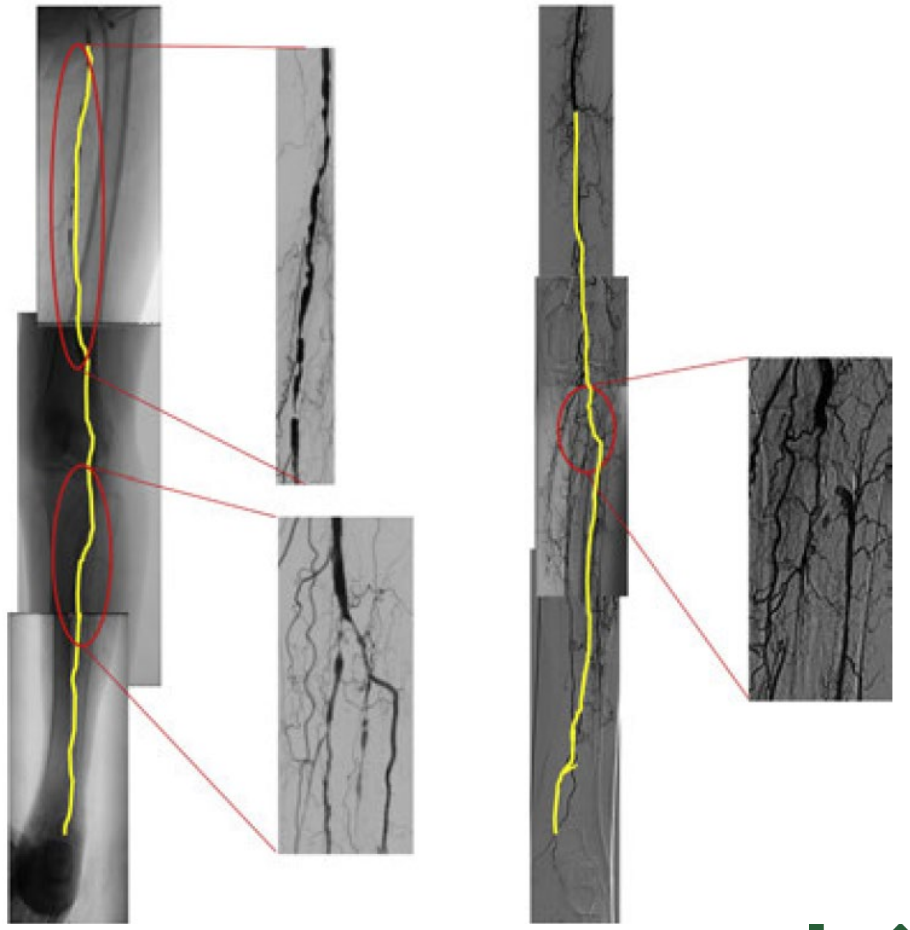


Figure 1: Representative angiograms of Global Limb Anatomic Staging System (GLASS) stage III disease patterns

Purpose of Study:

- To validate the use of the Global Limb Anatomic Staging System (GLASS) to predict revascularization success and endovascular outcomes from Chronic Limb Threatening Ischemia (CLTI)

Methods:

- Retrospective review of 144 patients (159 limbs) who underwent CT angiography and subsequent endovascular interventions at a single center from 2017-2021
  - Interventions targeted the SFA, popliteal and infrapopliteal arteries
- CT angiograms were reviewed to assign a GLASS Stage (I-III) for each limb according to the Global Vascular Guidelines for CLTI
- Endovascular outcomes were calculated from the center's VQI database
  - Follow up data was performed within 21 months
- Associations between GLASS Stage and outcomes were evaluated using univariable Cox regression analysis

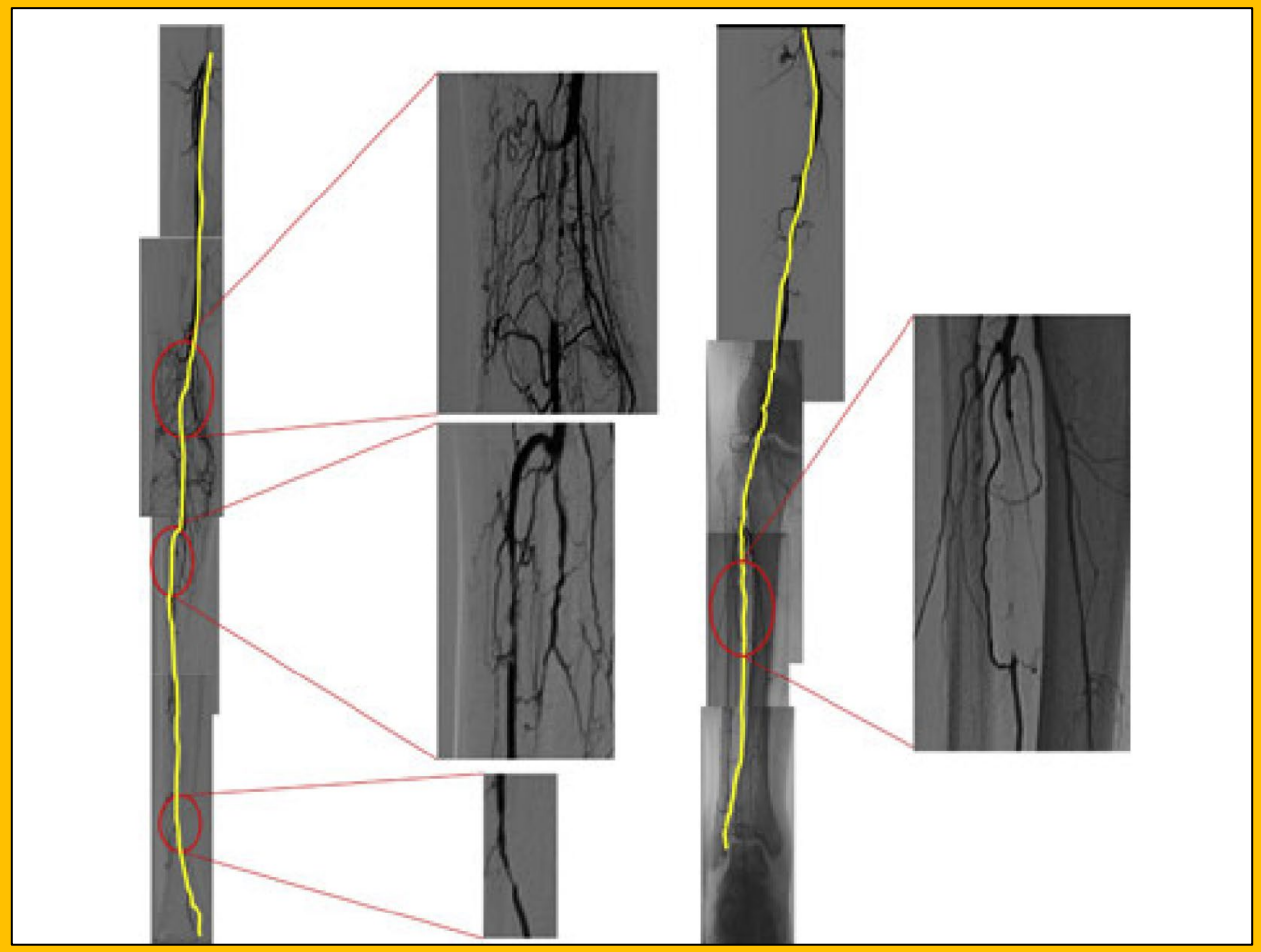


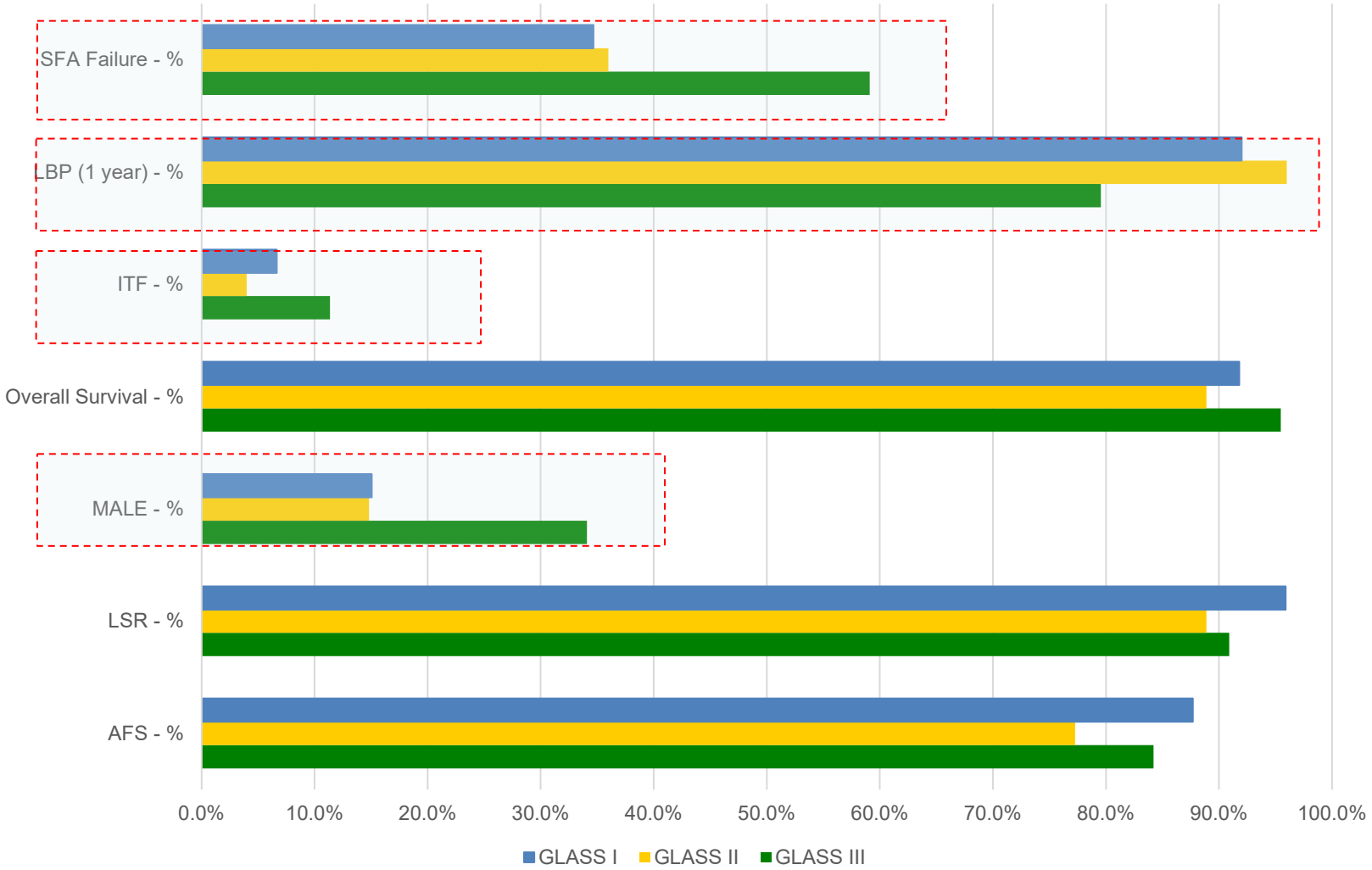
Figure 2: Representative angiograms of GLASS stage II disease patterns

Endovascular Outcomes Analyzed:

- Amputation-free survival (AFS)
- Limb salvage rate (LSR)
- Major adverse limb event (MALE)
- Superficial femoral artery (SFA) failure

Results: Technical Outcomes

Figure 3: Survival, Limb and Technical Outcomes by GLASS Stage



GLASS I
(n=73 patients, 82 limbs)

GLASS II
(n=27 patients, 29 limbs)

GLASS III
(n=44 patients, 48 limbs)

SFA = Superficial Femoral Artery

LBP = Limb Based Patency

ITF = Immediate Technical Failure

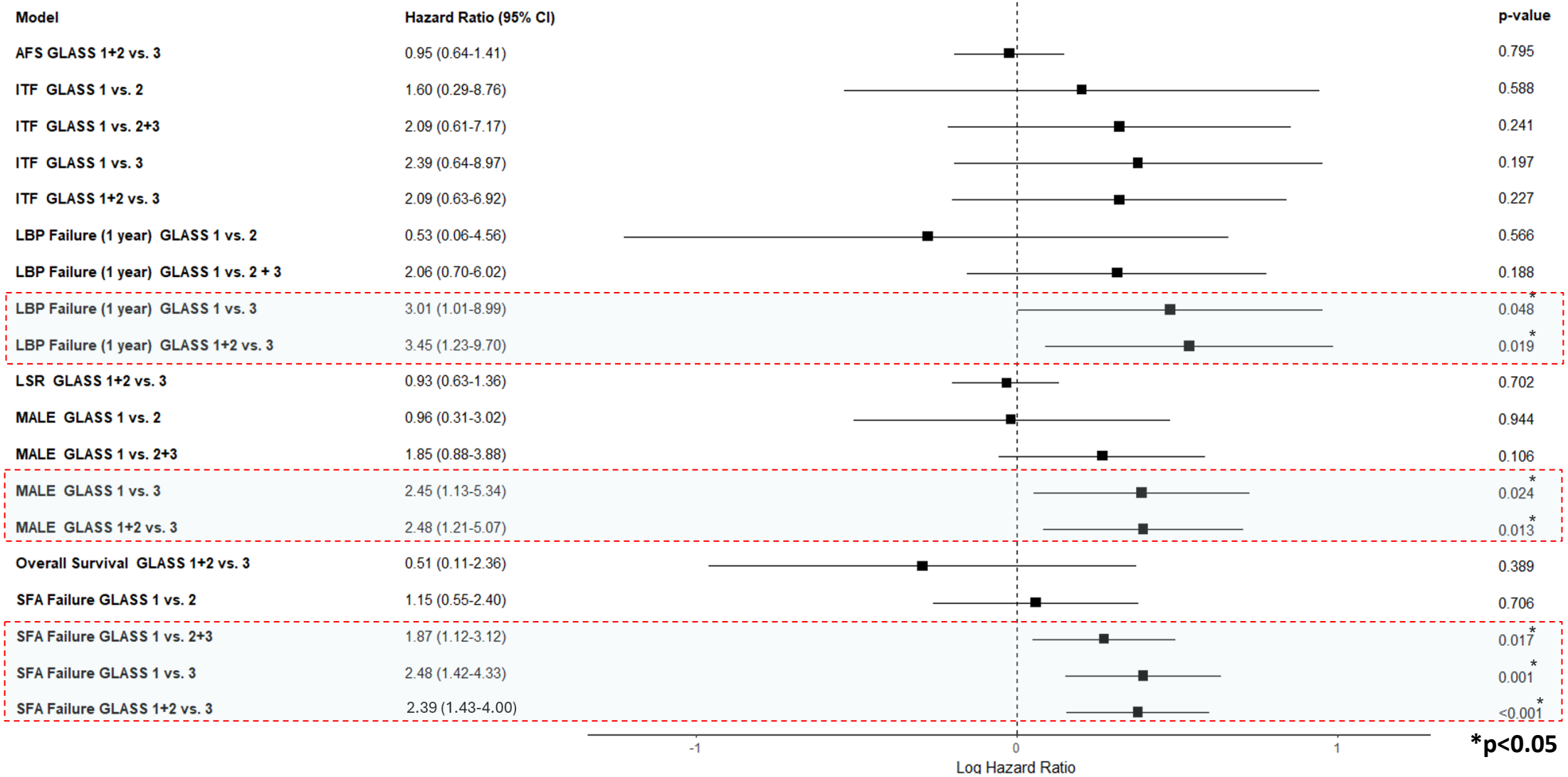
MALE = Major Adverse Limb Event

LSR = Limb Salvage Rate

AFS = Amputation Free Survival

Results: Univariable Cox Regression

Figure 4: Univariable Cox Regression Analysis comparing GLASS Stages with Technical Outcomes



AFS = Amputation free survival

LSR = limb salvage rate

MALE = major adverse limb event

ITF = immediate technical failure

LBP = limb based patency

SFA = Superficial Femoral Artery

Conclusion and Next Steps

- There is an increased risk of MALE, LBP failure and SFA Failure with Stage III lesions over Stage I or II.
- On Cox Regression, AFS, LSR, ITF and Overall Survival were not associated with more advanced GLASS Stages.
- GLASS staging offers valuable support in defining revascularization strategies for CLTI despite complex limb disease patterns.
- Future directions – explore additional predictors of technical success and strengthen findings by collaborating with other VQI centers.

Thank you to the Canadian Vascular Quality Initiative!

UNIVERSITY OF ALBERTA

Appendix: Definitions

- **Amputation free survival (AFS)**
  - **Survival without major amputation (above-ankle amputation and limb salvage)**
  - ***AFS = f(no major amputation on either limb AND survival), z= by patient***
- **Limb salvage rate (LSR)**
  - **(# total patients - # of major amputations (BKA or AKA)) / # total patients**
  - **BKA = below knee amputation, AKA = above knee amputation**
  - **Table 12.4 in GLASS Guidelines**
  - ***This variable is considered by patient***
  - ***LSR = f(no major amputation on either limb) , z = by patient***
- **Major adverse limb event (MALE)**
  - **Major amputation or any re-intervention**
  - ***MALE = f(major amputation on either limb where procedure was performed OR artery-reintervention), z = by limb***
- **Overall survival**

- **Immediate technical failure (ITF)**
  - **Guidewires were not able to pass through the lesion areas even after the use of devices/ techniques for crossing**
  - **Guidewires could not re-enter the true lumen with subintimal tracking, retrograde puncture techniques and re-entry devices**
  - **Target artery perforation**
  - **Acute technical success = achievement of final residual diameter stenosis < 30% for stent and < 50% for angioplasty or atherectomy by angiography without flow limiting arterial dissection or hemodynamically significant pressure gradient**
- **Limb based patency (LBP) (1-year)**
  - **Takes into account maintenance of at least 1 in line pulsatile flow to the ankle and foot**
- **SFA failure – Broad Definition**
  - **identified within 21 months follow up period**
  - **Occlusions, Stenosis > 50%, Artery re-treatment of any form of target lesion intervention - broader definition**

GLASS incorporates two novel and important concepts, the **target arterial path (TAP)** and estimated **limb-based patency (LBP)**

•TAP is defined as the treating surgeon or interventionalist as the optimal arterial pathway to restore in-line (pulsatile) flow to the ankle and foot.
  - This is based on either the least diseased or an angiosome preferred path

•LBP is defined as maintenance of in-line flow throughout the TAP, from groin to ankle.

Appendix: GLASS Guidelines

Table 5.3. Assignment of Global Limb Anatomic Staging System (*GLASS*) Stage

		Infrainguinal GLASS stage (I-III)				
FP Grade	4	III	III	III	III	III
	3	II	II	II	III	III
	2	I	II	II	II	III
	1	I	I	II	II	III
	0	NA	I	I	II	III
		0	1	2	3	4
		IP Grade				

NA, Not applicable.
After selection of the target arterial path (TAP), the segmental femoropopliteal (*FP*) and infrapopliteal (*IP*) grades are determined from high-quality angiographic images. Using the table, the combination of FP and IP grades is assigned to GLASS stages I to III, which correlate with technical complexity (low, intermediate, and high) of revascularization.

Table 5.4. Descriptive summary of Global Limb Anatomic Staging System (GLASS) stages of infrainguinal arterial disease

Stage	Estimated PVI outcomes		Anatomic pattern
	Technical failure	1-year LBP	
I	<10%	>70%	Short- to intermediate-length FP disease and/or short-length IP disease; no or minimal popliteal disease
II	<20%	50%-70%	Intermediate- to long-length FP disease; may include popliteal stenosis and/or short- to intermediate-length IP disease
III	>20%	<50%	Extensive FP or IP occlusions, alone or in combination with any disease in the other segment; popliteal CTO

CTO, Chronic total occlusion; *FP*, femoropopliteal; *IP*, infrapopliteal; *LBP*, limb-based patency; *PVI*, peripheral [endo-]vascular intervention.

Appendix: GLASS Guidelines

Table 5.1. Key definitions and assumptions in the Global Limb Anatomic Staging System (GLASS)

Restoration of in-line flow to the ankle and foot is a primary goal.
Target arterial path (TAP): the selected continuous route of in-line flow from groin to ankle. The TAP typically involves the least diseased IP artery but may be angiosome based.[a]
Limb-based patency (LBP): maintained patency of the TAP
Inflow disease (AI and CFA) is considered separately and assumed corrected when using the infrainguinal staging system for clinical decision-making.
Grade within segment is determined by presence of any one of the defined descriptors within that grade (ie, the worst disease attribute within the segment defines grade).
Calcification is considered only if severe; increases within segment grade by 1.
IM disease (pedal) modifier: describes status of IM vessels (including terminal divisions of the peroneal artery) providing outflow into the foot.

AI, Aortoiliac; *CFA*, common femoral artery; *IM*, inframalleolar; *IP*, infrapopliteal.
[a]The generic case of rest pain is used as a default for defining TAP as the least diseased IP artery, or a specific IP target artery based on clinical circumstances (eg, angiosome directed in setting of wounds) may be selected by the clinician.

VQI
Smoking Cessation

Naomi Wedel, MD, PGY-1 Vascular
Kenton Rommens, MD, FRCSC
University of Calgary

Background

- Smoking is the foremost cause of preventable morbidity and mortality in North America
- Prevalence decreasing but remains significant, highest rate of smoking in age 45-64 years old (16.5%)
- Cigarette smoke has adverse effects on vascular disease and interventions
- As surgeons, uniquely positioned and obligated to make a concerted effort to counsel our patients
- Large range of pharmacologic and behavioral methods
  - 2015 survey, among those who tried quitting, only 31.2% reported using evidence-based cessation treatments and 7.4% were successful in quitting
- Physician barriers:
  - Not perceiving smoking as an illness,
  - Ambivalent attitude or even negative attitude towards smoking patients,
  - Believe it's other physician's responsibility, or the patient's responsibility,
  - Concerns about damaging the therapeutic alliance,
  - Unfamiliar with new pharmacologic therapies, uncomfortable with behavioural support techniques,
  - Lack of time to devote to counseling

Methods

VQI Spring 2023 reporting cycle: two new measures were added in anticipation of the new National Quality Initiative of Smoking Cessation.

1. Preop smoking: percentage of those procedures where the patient was still smoking within one month of the procedure.
2. Smoking cessation: includes procedures performed on patients still smoking within one month of the procedure, percentage of those procedures where the patient was not smoking within one month on follow-up

Our Project:

1. Creation of infographic for vascular surgeons on most recent evidence-based strategies for smoking cessation
2. Pre-distribution of infographic: Review of smoking cessation rates reported in VQI
3. Post-distribution of infographic: Review of smoking cessation rates reported in VQI

SMOKING CESSATION

QUICK TIPS

1. ASK

Make asking about smoking cessation a vital sign at every visit.
Interventions as brief as three minutes can increase cessation rates significantly in particular when done by a vascular surgeon.

2. ADVISE

Advise every user to quit. This needs to be a clear, strong and personalized approach about why they should quit (including the risks to their vascular disease and impact on potential interventions).

3. ASSESS

All patients should be assessed for willingness to quit and offered treatment.
If unwilling use 5 R's: Relevance of quitting to patient's situation, Risks of ongoing smoking, Rewards of quitting, Roadblocks patients face, Repeat.

4. ASSIST

No evidence or consensus to help choose among pharmacologic therapies, final decision reflects patient's situation.
Evidence suggests that neither reducing smoking to quit nor quitting abruptly ("cold turkey") results in superior quit rates.
Suggest combining pharmacotherapy and behavioral support.

5. ARRANGE FOLLOW UP

Relapse often occurs within the first 3 months after quitting and continued intervention during that period is essential for sustained cessation.
Most smokers start trying to quit at least 6 times before they are finally successful

NICOTINE REPLACEMENT

- Increase rate of quitting by 50-60%.
- Dual-form NRT results in higher long-term quit rates than single form.
- Starting NRT 2 to 4 weeks before a planned quit date rather than on the quit date results in higher cessation rates (17% vs 14%)
- Side effects: minor irritation

VARENICLINE

- More effective at helping people to quit smoking than placebo, bupropion, and single form NRT. No difference in quit rates compared to dual-form NRT.
- Start 0.5mg daily for 3 days then increase to 0.5mg BID for 4 days then 1mg BID for 12 weeks, target quitting second week.
- Side effects: Neuropsychiatric (insomnia, vivid dreams, headaches, weight change, agitation, depression, suicidal ideation).

BUPROPION

- Increased smoking cessation rates (19%) compared to placebo or no pharmacological treatment (12%).
- Lower smoking cessation rates to varenicline and dual-form NRT.
- Start 150mg daily for 3 days then 150mg BID, and target quitting the second week of treatment then use maintenance therapy for 7-12 weeks.
- Side effects: Neuropsychiatric (seizures, depression, anxiety, agitation, insomnia).

E-CIGARETTES

- Controversial: limited evidence on devices, and uncertainty about possible health risks of long-term use.
- However, more recent studies demonstrated increased smoking abstinence at longer-term (>6 months) follow-up compared to NRT.

LOCAL RESOURCES

Alberta Quits website: FREE resources
Call toll-free at 1-866-710-7848
Text ABQUITS to 123456 to register for 3 month text messaging program
QuitCore support group program
CCS Quit Map to search for counselling

MORE INFORMTAION

information sheet with resource links:

The 5 A's

Health Provider Counselling

1. **Ask**: Make asking about smoking cessation a vital sign at every visit. Interventions as brief as three minutes can increase cessation rates significantly in particular when done by a vascular surgeon.
2. **Advise**: Advise every user to quit. This needs to be a clear, strong and personalized approach about why they should quit (including the risks to their vascular disease and impact on potential interventions).
3. **Assess**: All patients should be assessed for willingness to quit and offered treatment. If unwilling use 5 R's: Relevance of quitting to patient's situation, Risks of ongoing smoking, Rewards of quitting, Roadblocks patients face, Repeat.
4. **Assist**: No evidence or consensus to help choose among pharmacologic therapies, final decision reflects patient's situation. Evidence suggests that neither reducing smoking to quit nor quitting abruptly ("cold turkey") results in superior quit rates. Suggest combining pharmacotherapy and behavioural support.
5. **Arrange follow up**: Relapse often occurs within the first 3 months after quitting and continued intervention during that period is essential for sustained cessation. Most smokers start trying to quit at least 6 times before they are finally successful

Pharmacologic Therapies

Nicotine Replacement Therapy

- Increase rate of quitting by 50-60%.
- Dual-form NRT results in higher long-term quit rates than single form.
- Starting NRT 2 to 4 weeks before a planned quit date rather than on the quit date results in higher cessation rates (17% vs 14%.
- Side effects: minor irritation

Varenicline

- More effective at helping people to quit smoking than placebo, bupropion, and single form NRT. No difference in quit rates compared to dual-form NRT.
- Start 0.5mg daily for 3 days then increase to 0.5mg BID for 4 days then 1mg BID for 12 weeks, target quitting second week.
- Side effects: Neuropsychiatric (insomnia, vivid dreams, headaches, weight change, agitation, depression, suicidal ideation).

Bupropion

- Increased smoking cessation rates (19%) compared to placebo or no pharmacological treatment (12%).
- Lower smoking cessation rates to varenicline and dual-form NRT.
- Start 150mg daily for 3 days then 150mg BID, and target quitting the second week of treatment then use maintenance therapy for 7-12 weeks.
- Side effects: Neuropsychiatric (seizures, depression, anxiety, agitation, insomnia).

E-Cigarettes

- Controversial: limited evidence on devices, and uncertainty about possible health risks of long-term use.
- However, more recent studies demonstrated increased smoking abstinence at longer-term (>6 months) follow-up compared to NRT.

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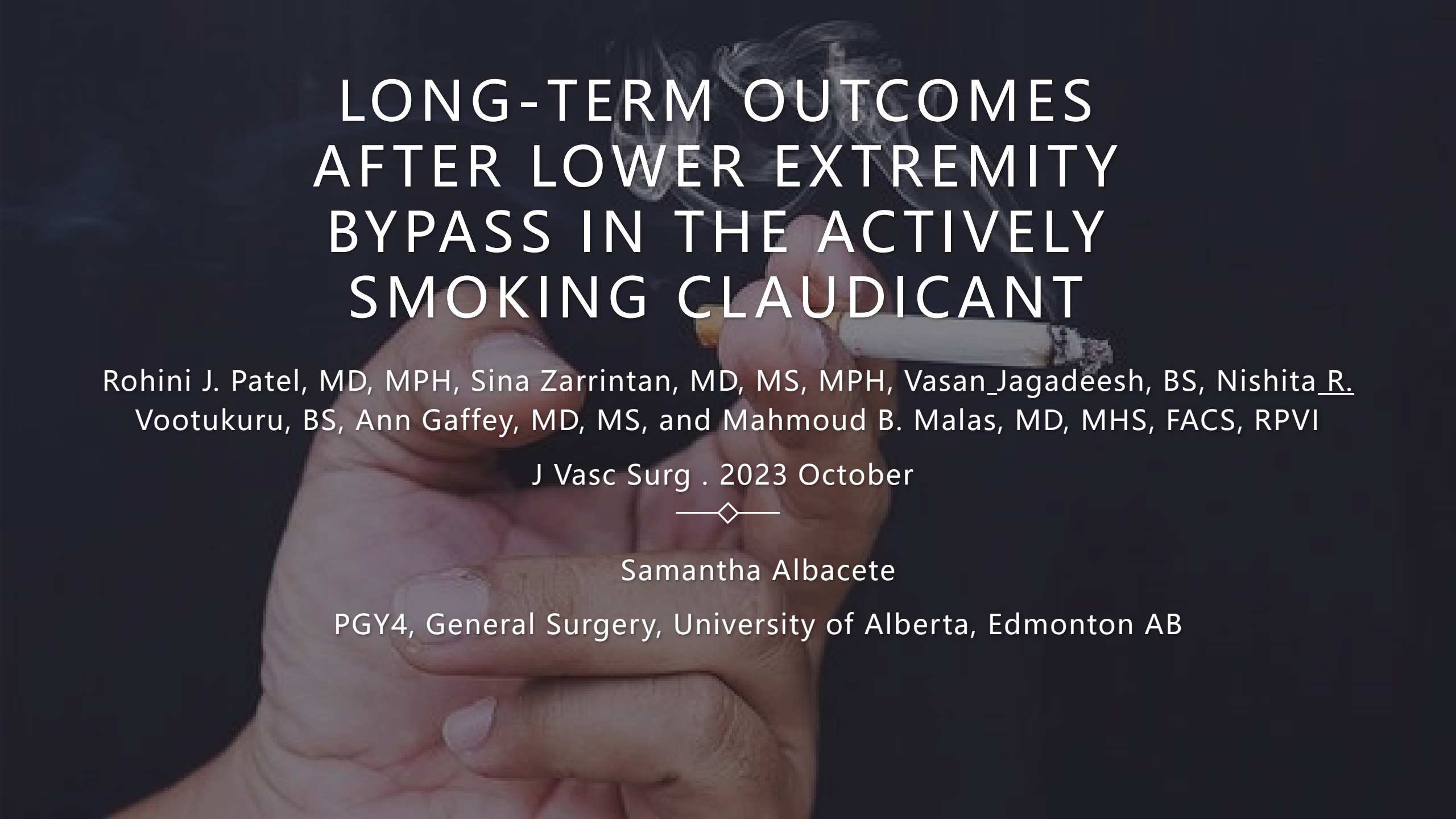


LONG-TERM OUTCOMES AFTER LOWER EXTREMITY BYPASS IN THE ACTIVELY SMOKING CLAUDICANT

Rohini J. Patel, MD, MPH, Sina Zarrintan, MD, MS, MPH, Vasan Jagadeesh, BS, Nishita R. Vootukuru, BS, Ann Gaffey, MD, MS, and Mahmoud B. Malas, MD, MHS, FACS, RPVI

J Vasc Surg . 2023 October

Samantha Albacete

PGY4, General Surgery, University of Alberta, Edmonton AB

ACTIVE SMOKERS ARE AT INCREASED RISK

Poor wound healing

Coagulation abnormalities

Cardiovascular & Pulmonary events

Smoking cessation is crucial in management of peripheral arterial disease (PAD)

- Decreased disease progression
- Improved graft patency
- Lower rate of perioperative complications

INVESTIGATE THE OUTCOMES OF ELECTIVE LOWER EXTREMITY BYPASS (LEB) SURGERY IN ACTIVELY SMOKING CLAUDICANTS

FOCUS ON THE IMPACT OF SMOKING ON LONG-TERM OUTCOMES

Methods

Vascular Implant Surveillance and Interventional Outcomes Network (VISION)

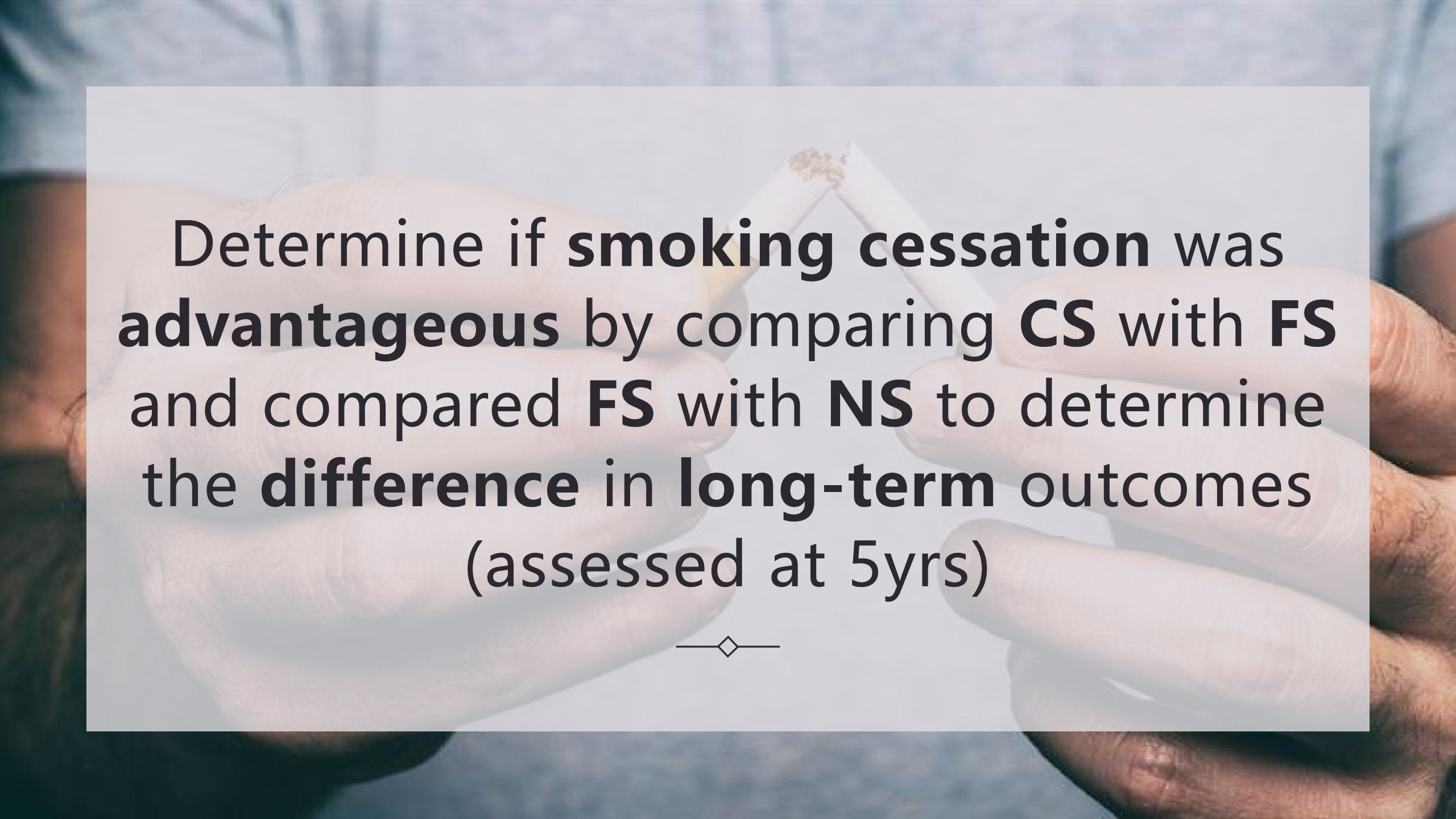
- Collaboration between VQI and MDEpiNet
- Used infrainguinal bypass dataset

Population

- LEB 2003 - 2019
- Inclusion: arterial occlusive disease + claudication symptoms
- Exclusion: concomitant suprainguinal pathology, aneurysm, ALI

Smoking

- Never smokers (NS)
- Former smokers (FS): quit >1 month ago
- Current smokers (CS)



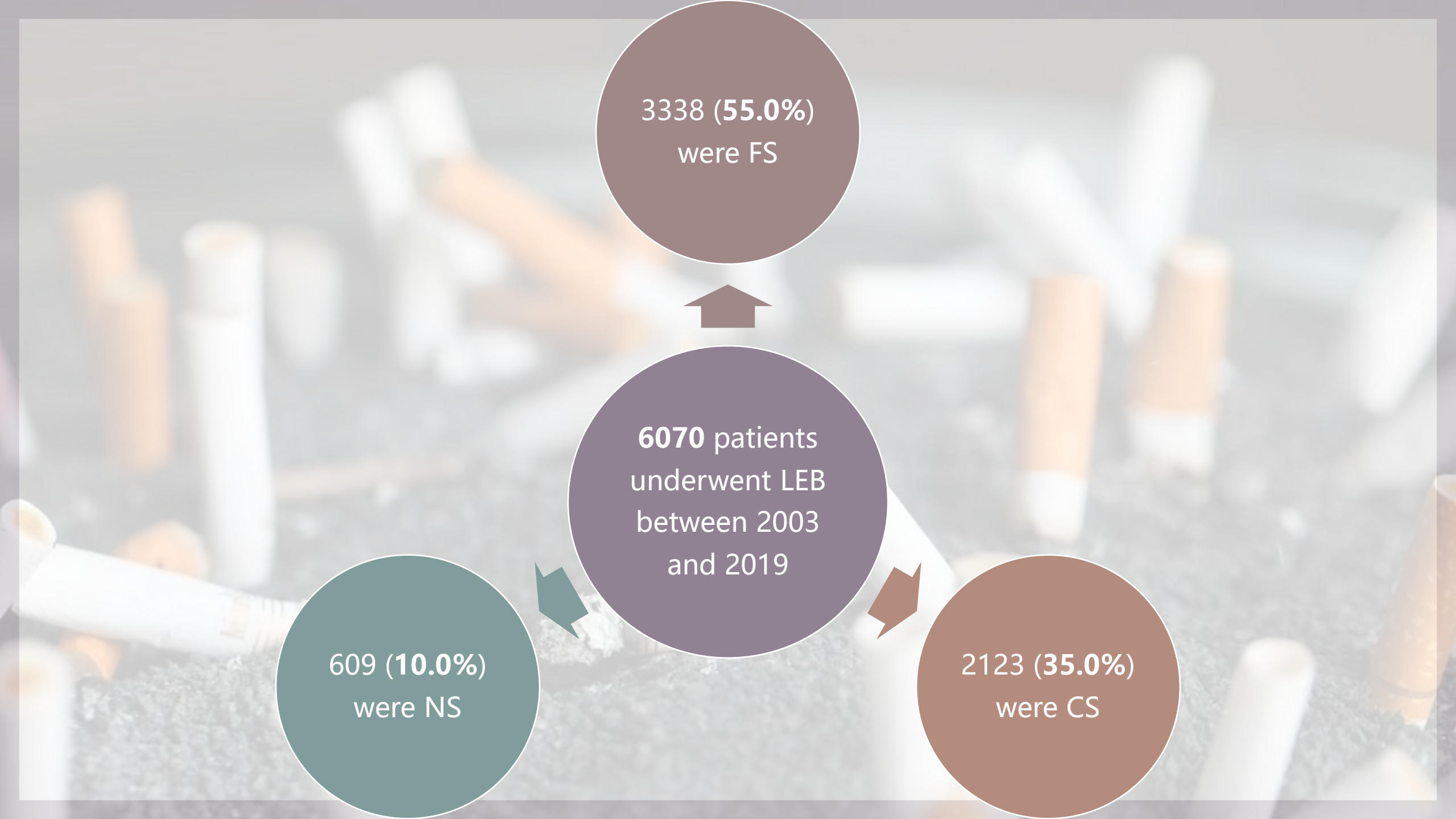
Determine if **smoking cessation** was **advantageous** by comparing **CS** with **FS** and compared **FS** with **NS** to determine the **difference** in **long-term** outcomes (assessed at 5yrs)

Primary outcomes

- Freedom from reintervention (FR) & amputation-free survival (AFS)
- Reintervention: any intervention after the index procedure
- Major amputation: any amputation above the ankle

Secondary outcomes

- Overall survival
- Limb salvage


3338 (**55.0%**) were FS
6070 patients underwent LEB between 2003 and 2019
609 (**10.0%**) were NS
2123 (**35.0%**) were CS

Former Smokers vs Current Smokers

3338 (61.1%) were FS

- before matching: more HTN/DM/CAD/CKD

2123 (38.9%) were CS

- before matching: younger and more COPD

After matching → 1451 pairs of FS and CS who had an open LEB

- Balanced and matched on 36 variables

Former Smokers vs Current Smokers

5-year outcomes for overall survival, freedom from reintervention, limb salvage, and amputation free survival

Before Matching

- Significantly greater AFS (67.2% vs 63.2%; P = .030) in FS compared with CS
- No significant difference in FR, LS, or AFS
- No significant difference in all-cause mortality, reintervention, or major amputation

Former Smokers vs Current Smokers

5-year outcomes for overall survival, freedom from reintervention, limb salvage, and amputation free survival

After Matching

- FS had a significantly greater OS (73.7% vs 65.1%; P = .0002) and AFS (70.8% vs 60.6%; P < .001)
- No significant difference in LS or FR
- CS were found to have a 37% increased risk of mortality (HR, 1.37; 95% CI, 1.15–1.64; P < .001) and 38% increased risk of major amputation or death (HR, 1.38; 95% CI, 1.18–1.62; P < .001)

Non-Smokers vs Former Smokers

609 (15.4%) were NS

- Before matching: older, fewer comorbidities

3338 (84.6%) were FS

- Before matching: younger, more HTN/CAD/COPD/CHF

After matching 497 pairs of NS and FS

- Balanced and matched on 36 variables

Non-Smokers vs Former Smokers

5-year outcomes for overall survival, freedom from reintervention, limb salvage, and amputation free survival

Before Matching

- No significant difference in OS, FR, LS, or AFS
- No significant difference in all-cause mortality, reintervention, major amputation, or major amputation or death (HR, 0.96; 95% CI, 0.79–1.17; P= .670)

Non-Smokers vs Former Smokers

5-year outcomes for overall survival, freedom from reintervention, limb salvage, and amputation free survival

After Matching

- No significant difference in OS, FR, LS, or AFS
- No significant risk difference in mortality, reintervention, major amputation, or major amputation or death (HR, 0.93; 95% CI, 0.71–1.22; P= .622)

Discussion

- Smoking cessation **may** lead to **positive** long-term outcomes
  - **No** significant **difference** between **NS** and **FS** in **AFS** and **OS**
- **Quitting smoking** before LEB may **improve long-term** outcomes, particularly regarding **OS** and **AFS**
  - Significant **increase** in **OS** and **AFS** in **FS** compared with **CS**

SMOKING DETRIMENTAL TO WOUND HEALING, ENDOTHELIAL FUNCTION, AND VASCULAR REMODELING

These **detrimental** effects may be **reversible**

- As demonstrated in this study where **NS** and **FS** had **similar outcomes**

Finding is **consistent** with other similar studies

- Improved AFS for patients with PAD for individuals who quit smoking compared with active smokers

How to communicate this with patients?

Vascular Physician Offer and Report (VAPOR) trial

- Any **two** smoking cessation components associated with 30-day cessation of smoking
- Combination of **physician** advice + nicotine **replacement** most impactful

Limitations

- Large registry
- Lack of smoking characterization
  - **Change** in **smoking status** between initial encounter and follow-up
  - **Duration** and **intensity**
- **VISION** database patients have Medicare
- Do not have information on **cause** of **death** → outcome could be attributed to cardiac issues, malignancy, or limb ischemia
- Other **factors** that may influence outcomes not accounted for → antiplatelet therapies

CONCLUSIONS

Current smokers had worse OS and AFS compared with patients who quit smoking ≥1 month before LEB

Quitting smoking can improve 5-year outcomes to matched non-smokers (OS, LS, FR, and AFS)

Structured smoking cessation discussions + tools during the vascular office visits before and after LEB

Questions?

Statistical Analysis

- significant variation in baseline characteristics between NS, FS, and CS → propensity score matching based on smoking status
- One-to-one propensity score matching without replacement used to balance the cohorts
- LEB balanced on 36 dimensions by the nearest neighbor principle with a caliper size of 0.10 for FS and CS and a caliper size of 0.01 for NS and FS
  - sex; prior ipsilateral lower extremity intervention; preoperative use of anticoagulation, beta-blockers, P2Y12 inhibitors, angiotensin-converting enzyme inhibitors, and statins; discharge P2Y12 inhibitor use; obesity; type of insurance [Medicare or non-Medicare]; diabetes; procedure time length; COPD; CKD; previous CABG/PCI; and prior contralateral lower extremity intervention
- Adequate match achieved with an absolute standardized difference of <0.10 in all baseline covariates
- Kaplan-Meier survival estimates, log-rank test, and univariate Cox regression models were used to analyze outcomes of interest
- All analyses were performed using Stata17.0 (StataCorp, College Station, TX)

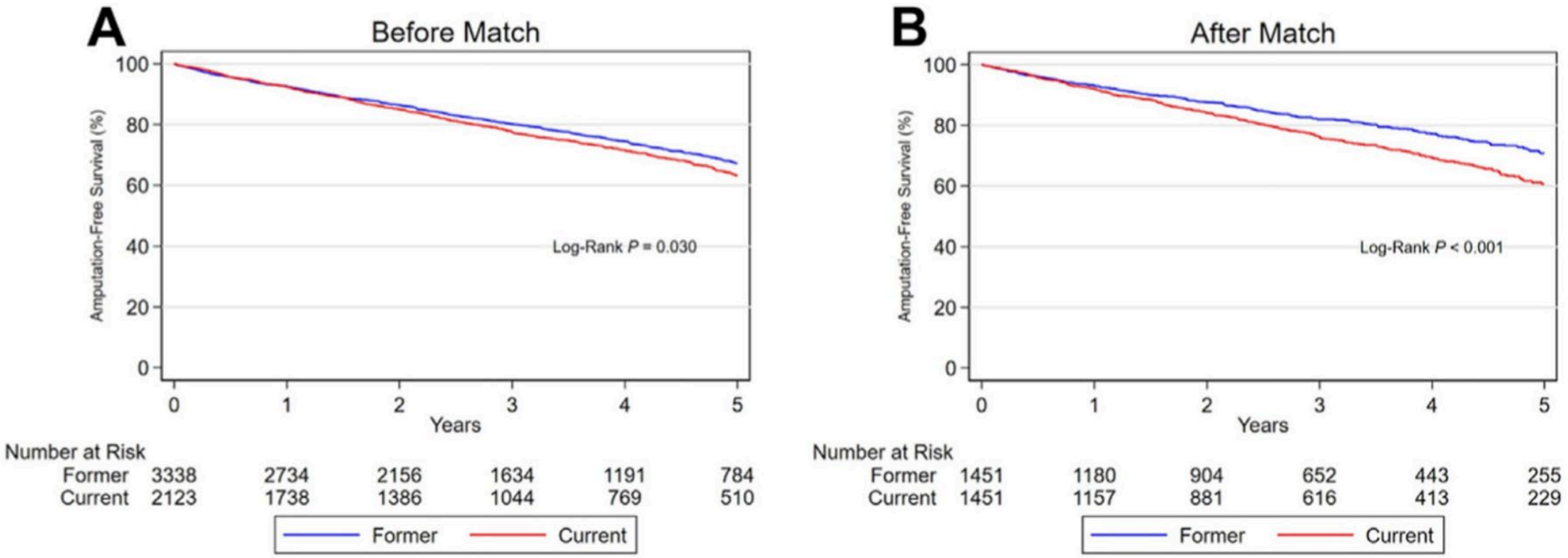


Fig 1.

Amputation-free survival (AFS) in former vs current smokers (CS) undergoing lower extremity bypass (LEB). **(A)** Before matching. **(B)** After matching.

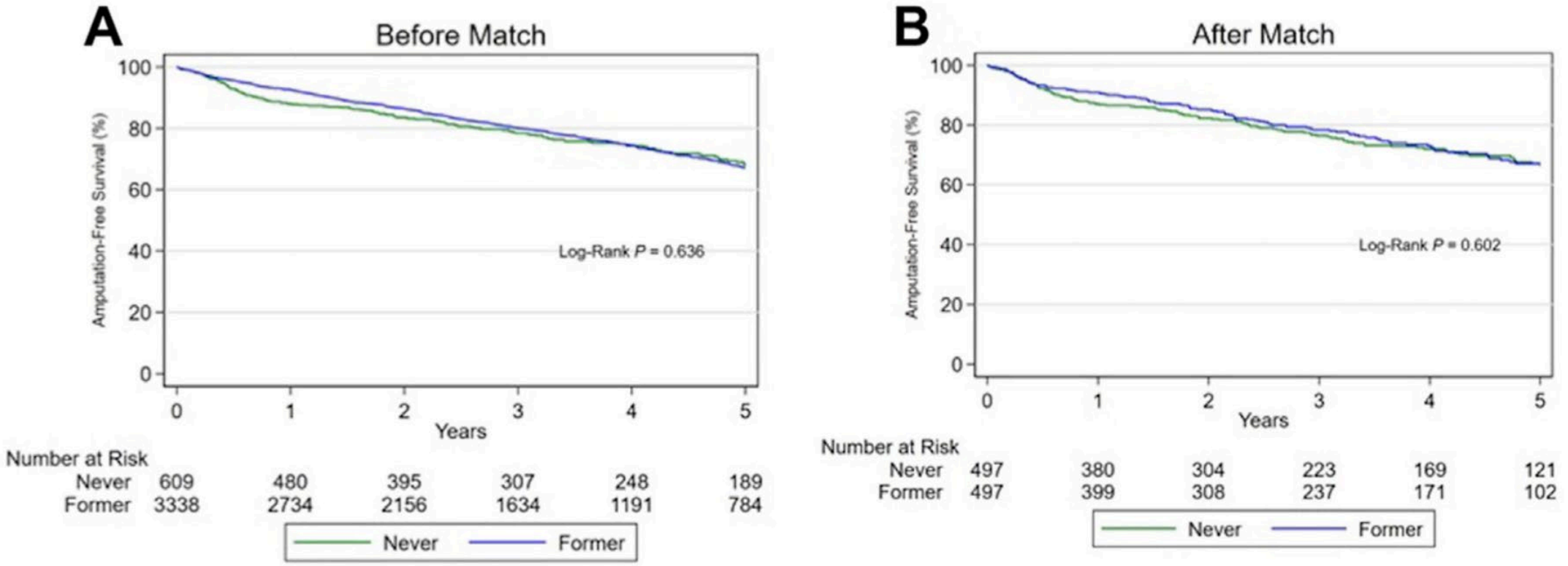


Fig 2.

Amputation-free survival (AFS) in never vs former smokers (FS) undergoing lower extremity bypass (LEB). **(A)** Before matching. **(B)** After matching.

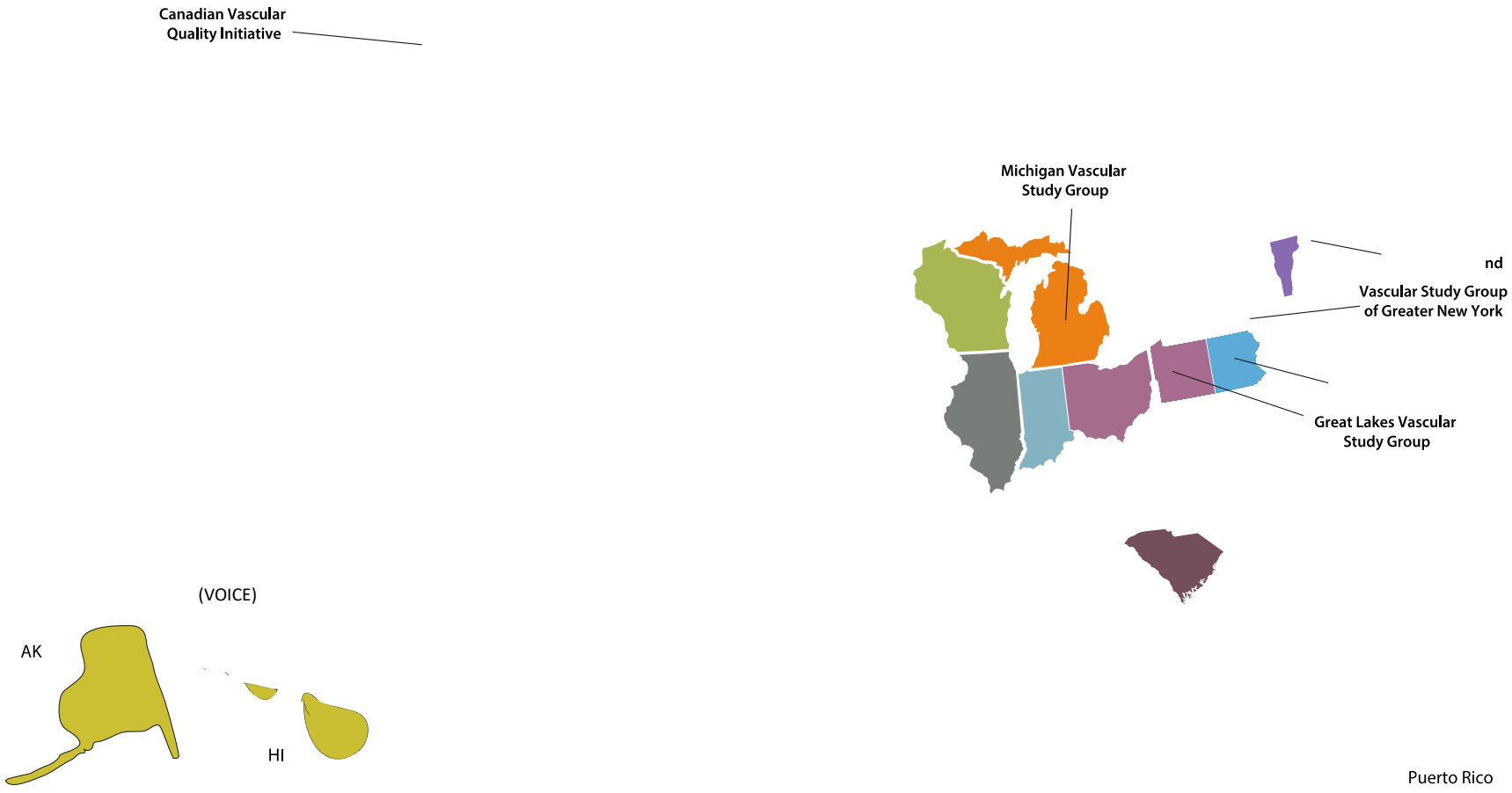
VQI National Update

Caroline Morgan, RN
Director of Clinical Operations, SVS PSO

SVS | VQI
In collaboration with NCDR®

VQI Participation

SVS | VQI
In collaboration with NCDR®

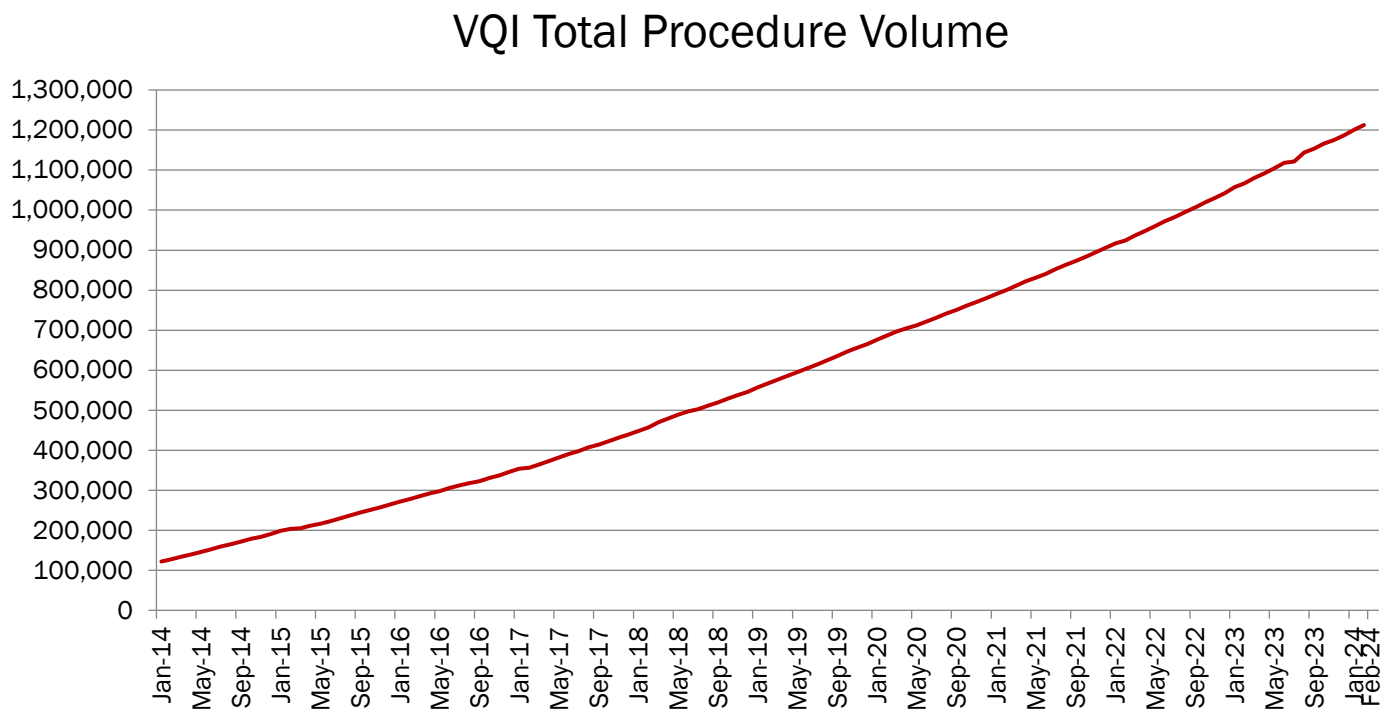


Regional Breakdown

Canadian Vascular Quality Initiative | 7 Centers
Carolinas Vascular Quality Group | 42 Centers
Great Lakes Vascular Study Group | 64 Centers
Michigan Vascular Study Group | 37 Centers
Mid-America Vascular Study Group | 74 Centers
Mid-Atlantic Vascular Study Group | 96 Centers
MidSouth Vascular Study Group | 27 Centers
Midwest Vascular Collaborative | 49 Centers
Northern California Vascular Study Group | 27 Centers
Pacific NW Vascular Study Group | 39 Centers
Rocky Mountain Vascular Quality Initiative | 57 Centers
Southeastern Vascular Study Group | 142 Centers
Southern California VOICE | 41 Centers
Southern Vascular Outcomes Network | 117 Centers
Upper Midwest Vascular Network | 66 Centers
Vascular Study Group of Greater New York | 47 Centers
Vascular Study Group of New England | 53 Centers
Virginias Vascular Study Group | 44 Centers
Singapore | 1 Center
TOTAL CENTERS | 1 ,032 Centers

Procedures Captured

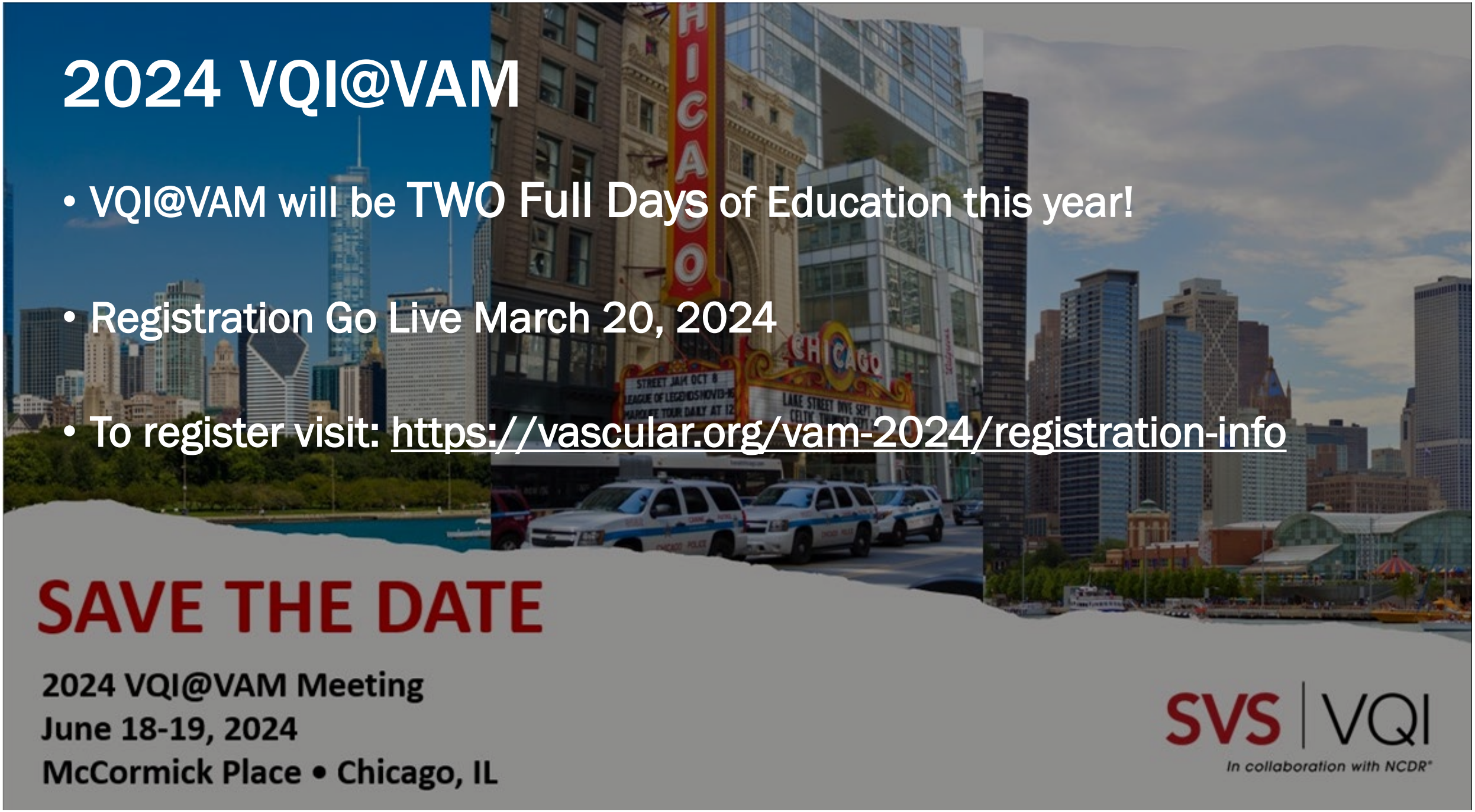
TOTAL PROCEDURES CAPTURED (as of 3/1/2024)	1,212,826
Peripheral Vascular Intervention	421,309
Carotid Endarterectomy	211,850
Infra-Inguinal Bypass	87,781
Endovascular AAA Repair	88,167
Hemodialysis Access	81,652
Carotid Artery Stent	123,237
Varicose Vein	65,538
Supra-Inguinal Bypass	27,797
Thoracic and Complex EVAR	33,288
Lower Extremity Amputations	31,920
IVC Filter	19,164
Open AAA Repair	19,019
Vascular Medicine Consult	1,833
Venous Stent	271



Total Procedure Volume reflects net procedures added to the registry for the month

2024 VQI@VAM

- VQI@VAM will be TWO Full Days of Education this year!
- Registration Go Live March 20, 2024
- To register visit: https://vascular.org/vam-2024/registration-info



SAVE THE DATE

2024 VQI@VAM Meeting
June 18-19, 2024
McCormick Place • Chicago, IL

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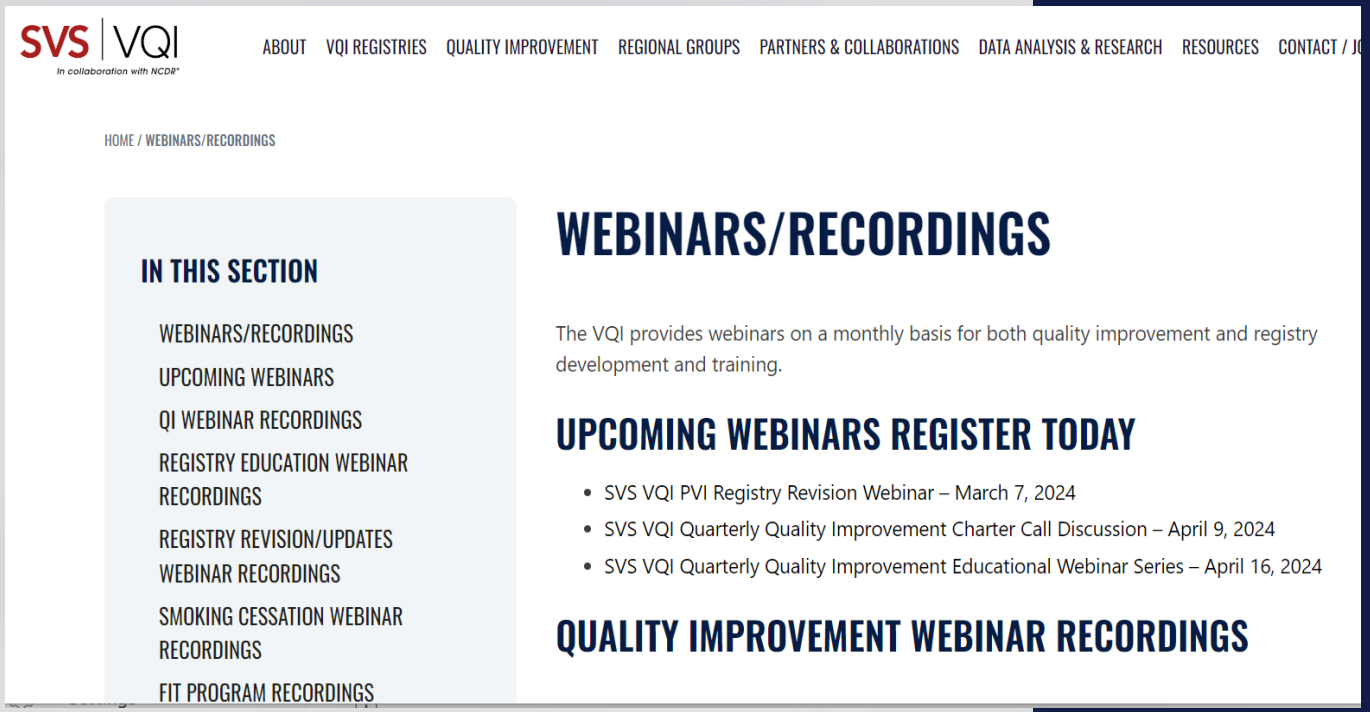
VQI.org Spotlight

Webinars & Recordings



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To register for upcoming webinars and view recordings visit: https://www.vqi.org/webinars-even

Please note that many recordings will require Members Only access. If you do not have a Members Only login, please contact jcorrea@svspso.org.

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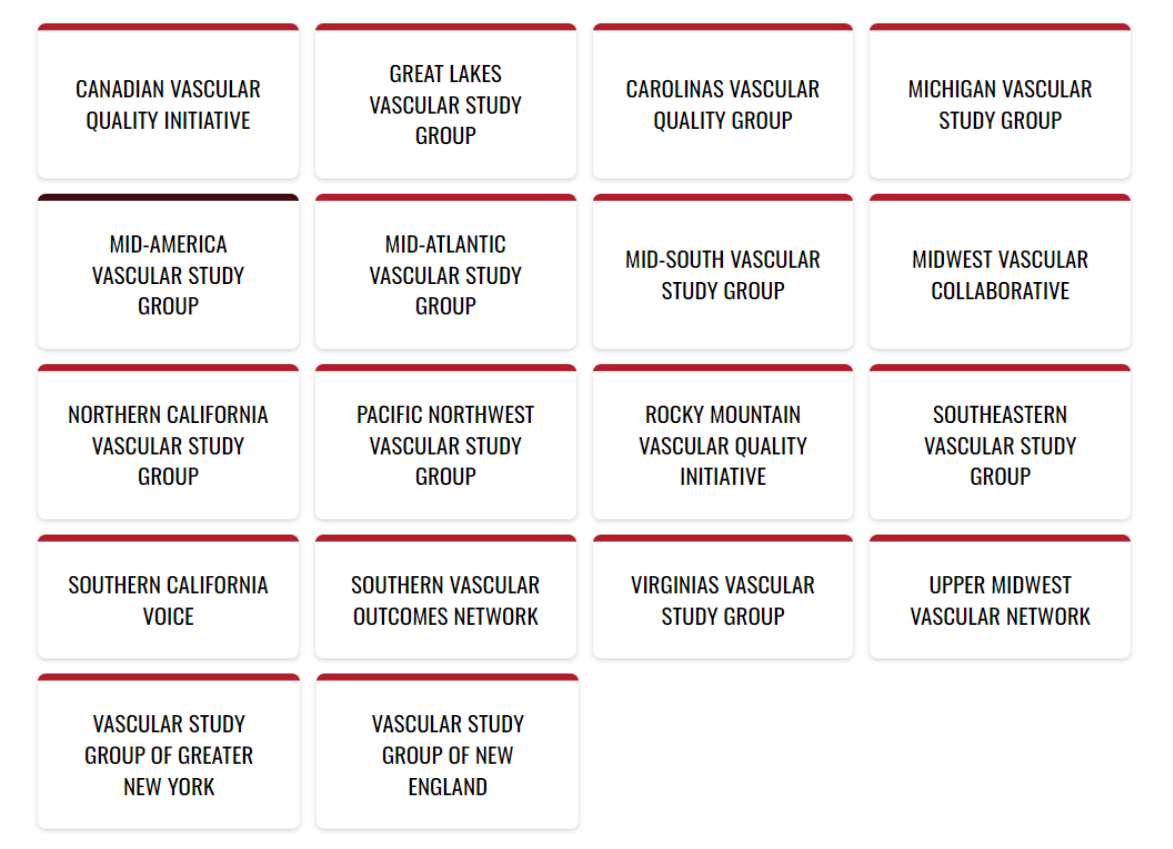
VQI.org Spotlight

VQI Regional Groups



Did you know there is a dedicated Regional Group page for each of the 18 Regional Groups in the VQI?

What can you find on your Regional Group page?

- Regional Meeting Information
- Regional Meeting Minutes
- Regional Meeting Slides
- Regional Group Information
- Visit: https://www.vqi.org/regional-groups/#current-regional-groups

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New Invitation Process

Overview

- Use of MailChimp for distribution – same platform as VQI monthly newsletter
- Sender – look for **SVS PSO**; check junk/clutter folders
- Once RSVP, ability to 'add to calendar' enabled/presented

Additional Mtg Information Resource Areas

- Individual regional web pages on VQI site
- Monthly VQI newsletter

View this email in your browser

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Spring 2024 Regional Meeting Information

DATE: Thursday, April 4
TIME: 3-6pm CT; data mgrs to meet at 2pm CT
FORMAT: Hybrid - the Zoom link can be found in the RSVP process
LOCATION (if applicable): Fairmont Winnipeg, Winnipeg, Canada (in conjunction with the Winnipeg Vascular & Endovascular Symposium)

Click the RSVP button below to:

1) Record your participation; and
2) Add the event to your calendar

As with previous meetings, the PSO will be granting attendees points for remote participation. Come prepared to discuss your region's results, and how improvements can be made!

RSVP

CE/CME Credit

- Click on link to complete attendance attestation & evaluation
- Seven (7) calendar days - including meeting day - to complete above documents
- No reminders; nothing granted retroactively
- Record of meeting attendance is required
- **Must** have active PATHWAYS account
- Approximately two weeks after meeting, DMU will send non-physician attendee's instructions on how to access credit certificate

Provided by Des Moines University (DMU)

https://dmu.co1.qualtrics.com/jfe/form/SV_bjE2IG260v99reu

SVS | Society for Vascular Surgery | American Venous Forum | fivos | Society for Vascular Medicine | VASA | SVU

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CE/CME Credit – ABS Transfer (Physicians only)

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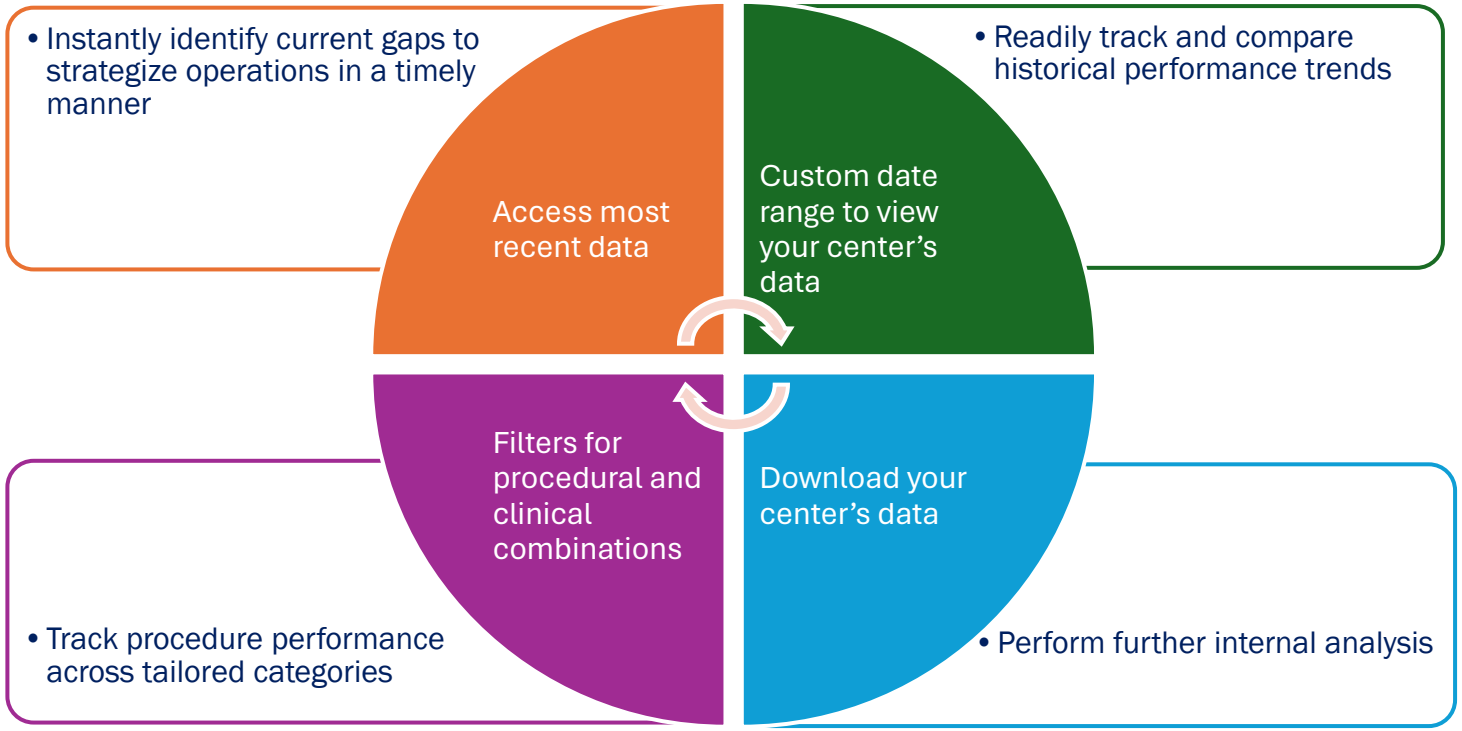
- DMU will submit credit to the American Board of Surgery (ABS)
- Following fields must be provided on attestation/evaluation only if credit is to be transferred to ABS
  - First and last name as it appears in your ABS record
  - Date of birth – month and day
- Wait eight (8) weeks from activity date prior to reviewing transcript

Questions? Contact cme@dmu.edu

New VQI Interactive Dashboards



- Launch – April 4, 2024
- Available on Pathways Platform
- Initial launch CAS registry
- Potential next registries –
  - CEA
  - PVI
  - Varicose Vein
  - INFRA/SUPRA

Named Physician Permission Management – IN DEVELOPMENT

SVS | VQI
In collaboration with NCDR®

- A new module within PATHWAYS for the lead Hospital Manager to collect and administer the permission from Physicians for Named Physician Reporting.
- Module includes a new dashboard, available to the lead HM only, for managing the physician-level permission and permission requests.
- Via email request, initiated by the lead HM, physicians will visit a dedicated web page and grant or deny permission to the Lead HM for viewing.

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TRENDING TOPICS

SVS VQI 2023 PUBLICATIONS

The SVS PSO Medical Director and Associate Medical Directors reviewed nearly 200 articles involving SVS VQI that were published in 2023. The team has chosen the following trending articles as a few of its favorites.

https://www.vqi.org/wp-content/uploads/Trending-Topics-Final-1.31.24.pdf

VQI Updates

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- Smoking Cessation Campaign focusing on patient/clinician education & SVS collaboration
- Harmonization of anticoagulation in arterial registries
- Device assist for collection of Thrombectomy/Thrombolysis devices in PVI
- Launch of Interactive Dashboard reports in CAS
- Infrainguinal Outcome Report
- In Development:
  - Open Aorta Registry
  - Interactive Dashboard reporting – staggered release to all registries
  - TEVAR branch enhancement to include aberrant anatomy
  - Continued efforts for harmonization across registries
  - Suprainguinal Outcome Reports
  - Enhanced reporting measure for biannual reports
    - PVI and Open Aorta Registries

Unblinding Reporting Measures

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- Process measures only
- All center lead physicians in the region are requested to vote for unblinding. One 'No" vote will result in the measure failing to unblind.
- Once approved to unblind by the region, unblinding will be part of regional reports. New physicians to the region are grandfathered into the previous vote

- What are the process measures?
  - Preop Smoking
  - Smoking Cessation at Follow-up
  - Long-Term Follow-up
  - Discharge Medications
  - Sac Diameter - EVAR/TEVAR
  - ABI/TBI - PVI, Infrainguinal & Suprainguinal Bypass
  - HDA: Primary AVF vs. Graft
  - HDA: Ultrasound Vein Mapping

2022 RMVQI Participation Award Winners

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Toronto General Hospital
Thunder Bay Regional Health Science Center

Covenant Health-Grey Nuns Hospital
CHUM

Nova Scotia Health
Peter Lougheed Centre

Quality Improvement Updates

SVS | VQI
In collaboration with NCDR®

Betsy Wymer, DNP, RN, CV-BC
Director of Quality, SVS PSO

Quality Improvement:
National Quality Initiative - Smoking Cessation

SVS | VQI
In collaboration with NCDR®

- Introduced at VQI@VAM 2023
- CAN-DO Program
  - Choosing Against combustible Nicotine Despite Obstacles
- Arterial registries only
- Reporting measures added Spring 2023
  - Preop Smoking – Elective procedures
  - Smoking Cessation LTFU– Elective, Urgent, Emergent procedures
- Minimal addition of variables Fall 2023
- Education https://www.vqi.org/quality-improvement/national-qi-initiatives/
  - Physician and Patient
  - Toolkits
  - Billable codes and sample dictation
  - Resources
- Participation Points
  - To be calculated like other NQI's at 80%

Quality Improvement – Participation Points

- Participation Point Document
  - https://www.vqi.org/quality-improvement/participation-awards/
- No change in domains for **2024**
  - LTFU
  - Regional Meeting Attendance
  - QI Project
  - Registry Subscriptions
- **New Annual Webinar** – Review of participation point breakdown
  - In addition to reminders throughout year
- Participation points
  - Captured CY January 1- December 31
  - No extensions, no exceptions
  - Center responsibility to know point status estimate throughout year
    - PSO calculates this only annually
    - 2-week adjudication period
    - Follow SVS VQI Reporting schedule https://www.vqi.org/resources/reporting/
    - Monitor share-a-file

Participation Points New 2024 Update

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Domain – Regional Meeting attendance – 30% weighted

Credit will be given for remote attendance since virtual and hybrid meetings will be an option for the 2024 meetings.

- Each regional meeting will be scored on a 0–3-point scale:
  - For centers with 3 or more MDs, 1 point for each **MD attending**, up to a max of 3 points
  - If site has only 2 MDs and 1 **MD attends**, 2 points
  - If site has <3 MDs and all **MDs attend**, 3 points
  - Support staff (Fellows, Residents, Physician Assistants, Nurse Practitioners, et. al., -those with an **ACTIVE** Pathways account) will receive a maximum of 1 point regardless of MD attendance. Ex – if 1, 3, or 5… support staff at a center attends a meeting, the center will get 1 point.
  - Regional medical directors and regional lead data managers will each receive one
- point

Centers with non-physician staff members attending VQI@VAM, either in person **OR** virtual, will earn 1 extra point

Participation Points New 2024 Update

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Domain – Quality Improvement Project – 25% weighted

Scoring on 0 – 6-point scale to keep consistent with other measures. This gives centers options for getting **6 maximum QI points**.

- Initiation of a QI Project, evidenced by submitting a Project Charter to bwymer@svspso.org (2 points). **One charter per year per center.**
- Presenting a QI Project (presentation or poster) at a Regional VQI, *Regional Society Meeting, or ***Hospital Board and/or C Suite** meeting (2 points) *When presenting at succinct regional meetings, project slides must reflect a change or update in status*
- Presenting a QI Project (presentation or poster) at the National VQI or *Vascular Annual Meeting (2 points)
- *Pub
- Cente
  Initia

Support staff (Fellows, Residents, Physician Assistants, Nurse Practitioners, et. al., -those with an **ACTIVE** Pathways account)

* Please send attestation (proof) to bwymer@svspso.org on or before December 31, 2024. Only 2 presentations to the Hospital Board and/or C Suite allowed per year per center.

Quality Improvement – 2023 Charter Review

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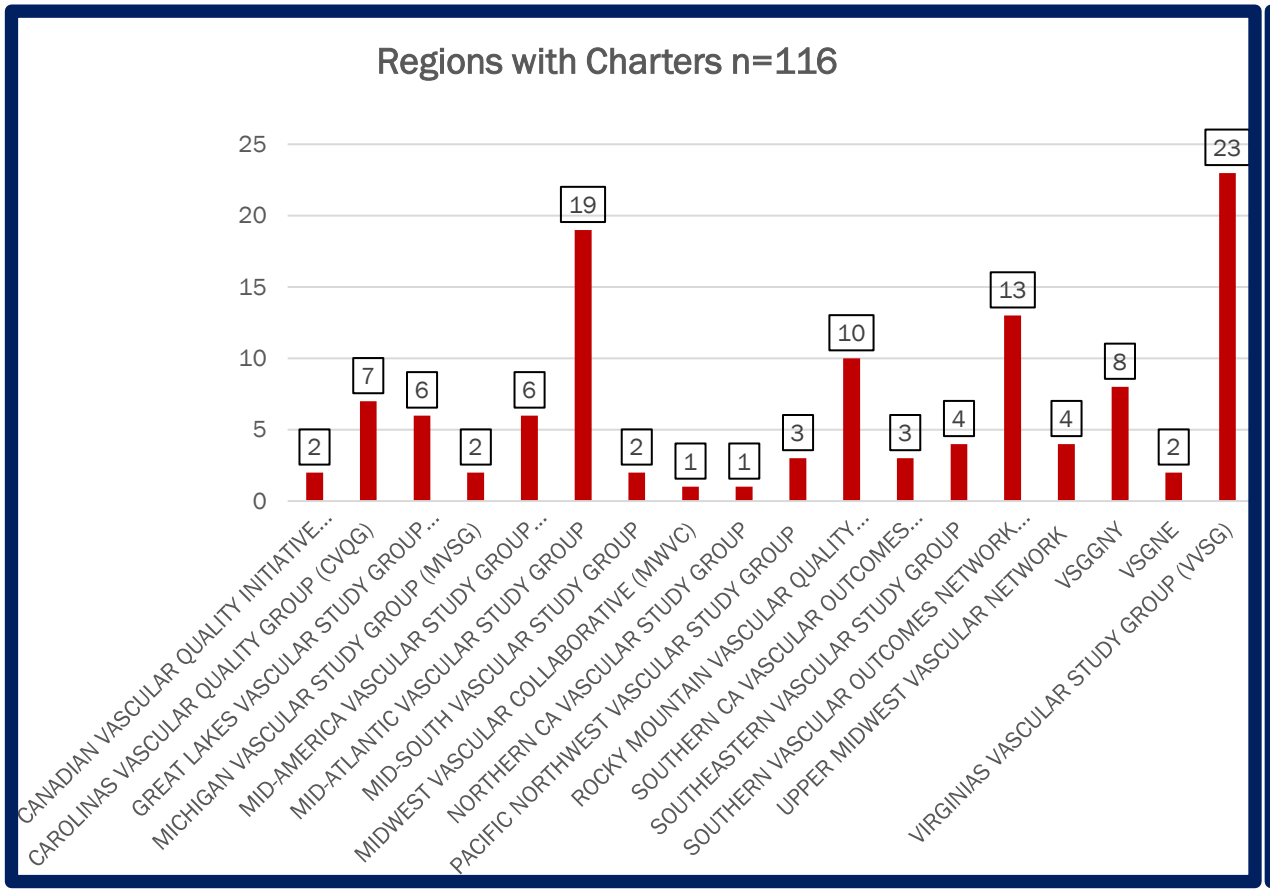

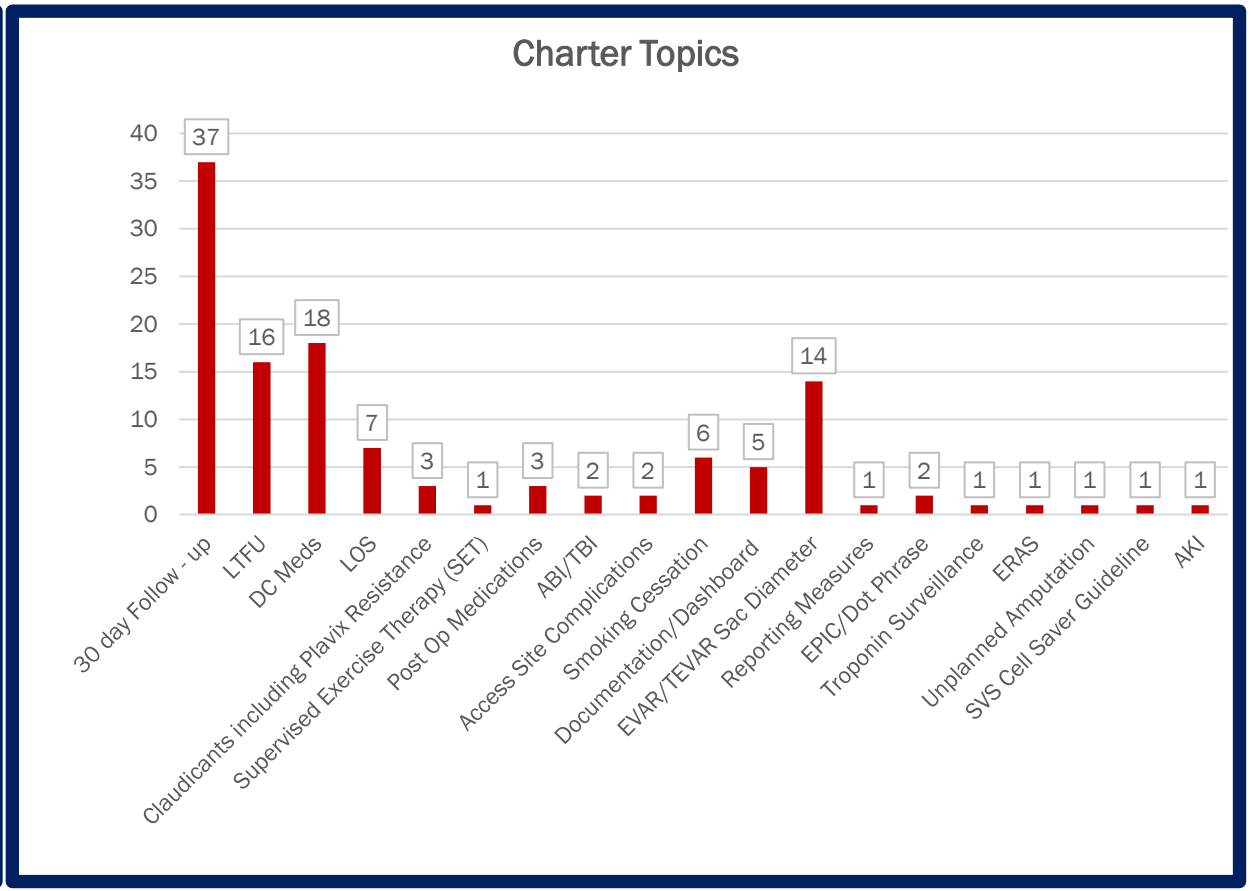

Quality Improvement – FIT 2024

Consider becoming a FIT Mentor

https://www.surveymonkey.com/r/VQI_Mentor_Survey

Committee Updates

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AQC Update

Mary MacDonald, MD

- Committee meets every other month
  - Jan, March, May……
- Re-engagement of registry committees
  - Review of Open Aorta Registry revision & providing committee feedback
- Decision made to keep all registry procedure variables mandatory for data submission
- New reporting measures are beginning to be rolled out for Biannual meetings. Continuing to work with committees

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VQC Update

No representative

- Committee meets bi-annually
- Next meeting June 20, 2024, hybrid meeting at VAM. Details to be sent soon
- Venous Stent Registry continuing work with committee to revise data fields & decrease data burden
- Varicose Vein Registry will be working with the PSO to review reporting measures & integration into the new Interactive Dashboards
- IVC filter registry continues work on their IVC charter & suggested registry revisions

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Arterial RAC Update

No representative

As access to VQI data is a valuable benefit to participation in a registry. Below are important guidelines to remember:

- There is a limit on number of proposals per cycle to 5 from each institution
- If a center hits 50% of the limit (15 proposals) a faculty member from their site will be expected to serve on the RAC as an at large member the next calendar year.
- Participation will be considered actively reviewing assigned RAC proposal for each RAC cycle and attending the review meeting.
- If there is a failure to comply with the review and meeting requirements in any given RAC review cycle, that institution's data sets will be withheld for their approved projects, until the next cycle in which they are compliant with these requirements.

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Guidelines and Restrictions on Data Use

- In order to receive a SVS VQI dataset, your center must already have a subscription to that SVS VQI registry and have an active PATHWAYS account.
- Please review the **SVS PSO Data Use Agreement** for restrictions and conditions on use.
- Please see the **Product Identification Policy**, which may affect your dataset request as there are stringent restrictions on the use of product data in VQI protocols.

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Arterial RAC Resources

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https://www.vqi.org/data-analysis/

IN THIS SECTION

- DATA ANALYSIS & RESEARCH
- SVS VQI PUBLICATIONS
- RAC APPROVED PROJECT SEARCH
- SVS VQI MEDICARE MATCHED BLINDED DATASETS
- SVS VQI VISION
- SVS PSO DATA ANALYSIS GUIDELINES
- DATA ANALYSIS TOOLS

PSO Arterial RAC – June 2024 Proposal Submission

Call for Proposals: May 1, 2024
Submission Deadline: May 29 2024
Review period open: May 30, 2024
Review period end: June 9, 2024
Meeting: June 10, 2024

Venous RAC Update

Vacant

- In order to receive a PSO VQI dataset, your center must have a subscription to the registry of interest or include an author the does
- https://www.vqi.org/data-analysis/

IN THIS SECTION

- DATA ANALYSIS & RESEARCH
- SVS VQI PUBLICATIONS
- RAC APPROVED PROJECT SEARCH
- SVS VQI MEDICARE MATCHED BLINDED DATASETS
- SVS VQI VISION
- SVS PSO DATA ANALYSIS GUIDELINES
- DATA ANALYSIS TOOLS

PSO Venous RAC – May 2024 Proposal Submission

Call for Proposals: April 3, 2024
Submission Deadline: May 1, 2024
Review Period open: May 2, 2024
Review Period close: May 12, 2024
Meeting: May 13, 2024

PSO Venous RAC – July 2024 Proposal Submission

Call for Proposals: May 29, 2024
Submission Deadline: June 26, 2024
Review period open: June 27, 2024
Review period close: July 7, 2024
Meeting: July 8, 2024

Everything RAC =

mlatus@svspso.org

Governing Council Update

Yaasin Abdulrehman, MD

- Meets twice a year
- Last meeting: November 2023
- ACC representatives added to each of the SVS VQI Governing Councils & Committees
- Carotid Stent NCD Education & Communication
- Prioritization of Registry Development – LE Amputation registry slated for next major revision
- Adam Beck –GC Chair
- Grace Wang –Vice Chair
- Next meeting June 2024 - VAM

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GC Update Continued:

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Committee Review Process

- Reconstituting all Committees
  - Active Participants
  - Chairs
  - Vice-Chairs
  - Non-Physician Participants
- Formal Terms Limits
- Formal Evaluation Process, Utilizing SVS Pre-existing Format
- Chairs Will Evaluate Members on an Annual Basis
- Executive Committee, Staff and Medical Directors will Evaluate Chairs

GC Update Continued

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Strategies to Increase Regional Meeting Engagement

- Begin planning early
  - Save the date to Regional calendars asap – Additional details can be added as necessary
  - Invite speakers early
  - Your Regional Lead Data Manager is there to assist with planning
- Use annual Trending Publication list for possible presentations (provided by the PSO)
- Invite Regional Physicians to speak about their committee activities
- Invite FIT Fellows to present/provide updates on their projects
- Ask Data Managers to present/provide updates on charters
- Think of Hot Topics and invite guest speakers – Remote attendance may make this more attractive
- Send out Regional specific agenda to the group in advance of the meeting to encourage interest and engagement

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Technology Update

Product Releases

Q1 2024		
Release Date	**Description**	**Registries**
02/28/2024	PVI Revision; Center Characteristics Update; CAS Certification Data Download Report - Retired	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
02/07/2024	Shared Decision field to CAS Registry; Open AAA Repair Revision - ERAS Tab; TEVAR Registry - Aberrant Anatomy Revision; Delete Reason for Submitted Record; LTFU Data Download Update; Device Updates	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
01/17/2024	PVI Display Label Change	PVI
Q4 2023		
12/20/2023	2024 VQI Procedure Inclusion/Exclusion Criteria; 2024 VQI Eligible ICD-10/CPT Codes	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
12/13/2023	Harmonization of CAD; Update Exercise Program Variables; HDA Report Updates to Filters and Definitions	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
12/06/2023	2023 Q4 VQI Help Text Update	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
11/01/2023	Smoking Fields Revision	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; OPEN_AAA; PVI; SUPRA; TEVAR; VMC
09/27/2023	Infra/Supra Registry Update; Device Updates; Q3 2023 GUDID & Symmetric Refresh	AVACCESS; CAS; EVAR; INFRA; PVI; SUPRA; TEVAR; VSR
09/12/2023	2023 Q3 VQI Additional Help Text Updates	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR
09/06/2023	2023 Q3 VQI Help Text Update	EVAR; INFRA; PVI; SUPRA; TEVAR; VMC
08/30/2023	NEW Smoking Cessation Fields, Follow-up Outcomes Reports Updates, COVID Variables Retired, Infra-inguinal Bypass Update - Opioid Fields	AMP; AVACCESS; CAS; CEA; EVAR; INFRA; IVC; OPEN_AAA; PVI; SUPRA; TEVAR; VMC; VSR; VUR; VV
06/14/2023	Physician Snapshot Reports	CAS; CEA

HM Named Physician Permission Management
(In Development)

- A new module within PATHWAYS for the lead Hospital Manager to collect and administer the permission from Physicians for Named Physician Reporting.
- Module includes a new dashboard, available to the lead HM only, for managing the physician-level permission and permission requests.
- Via email request, initiated by the lead HM, physicians will visit a dedicated web page and grant or deny permission to the Lead HM for viewing.

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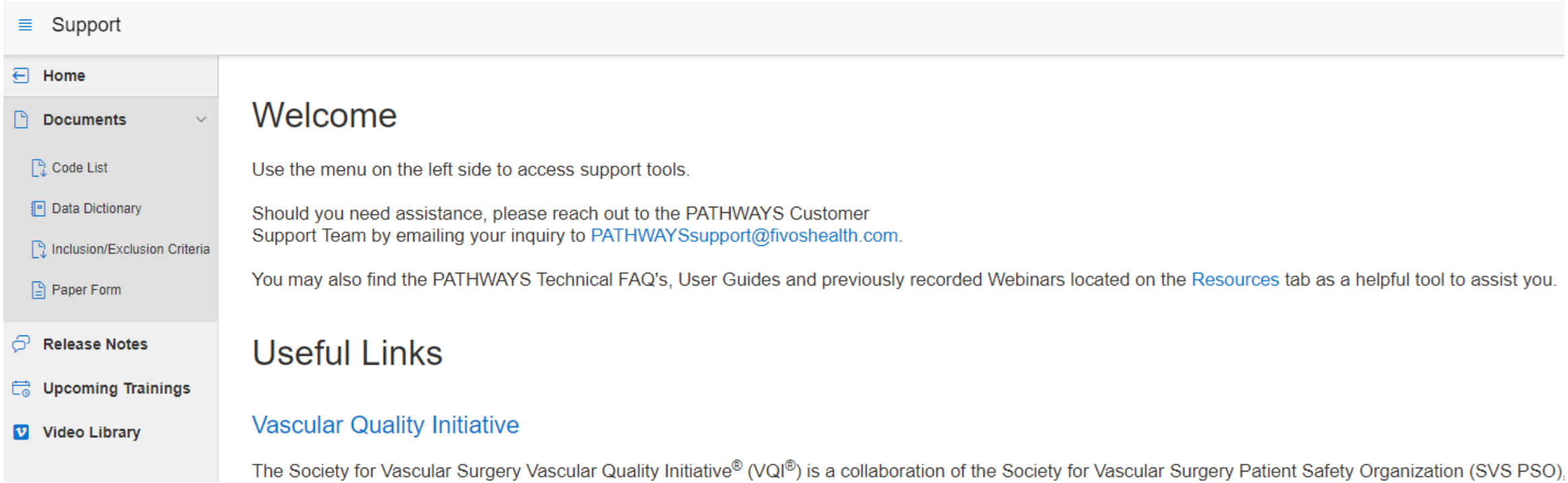
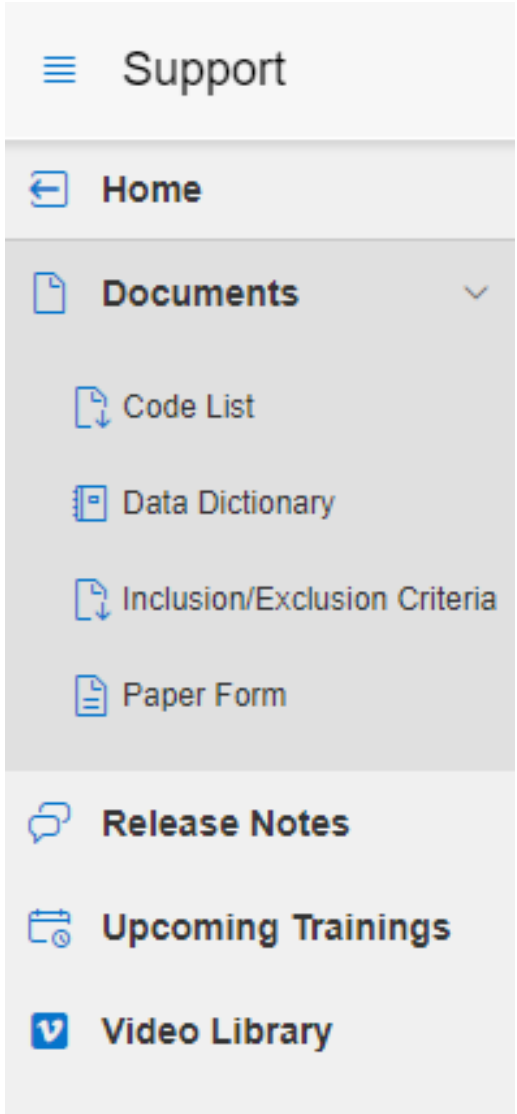
PATHWAYS Support

PATHWAYS Support

Need help? Check out PATHWAYS Support!



PATHWAYS Support



- **Documents**
  List of documents necessary for new staff and experienced abstractors to assist with data abstraction.

- **Release Notes**
  Release announcements highlighting changes and improvements to the registries.

- **Upcoming Trainings**
  Upcoming training opportunities with registration links for new staff and experienced abstractors.

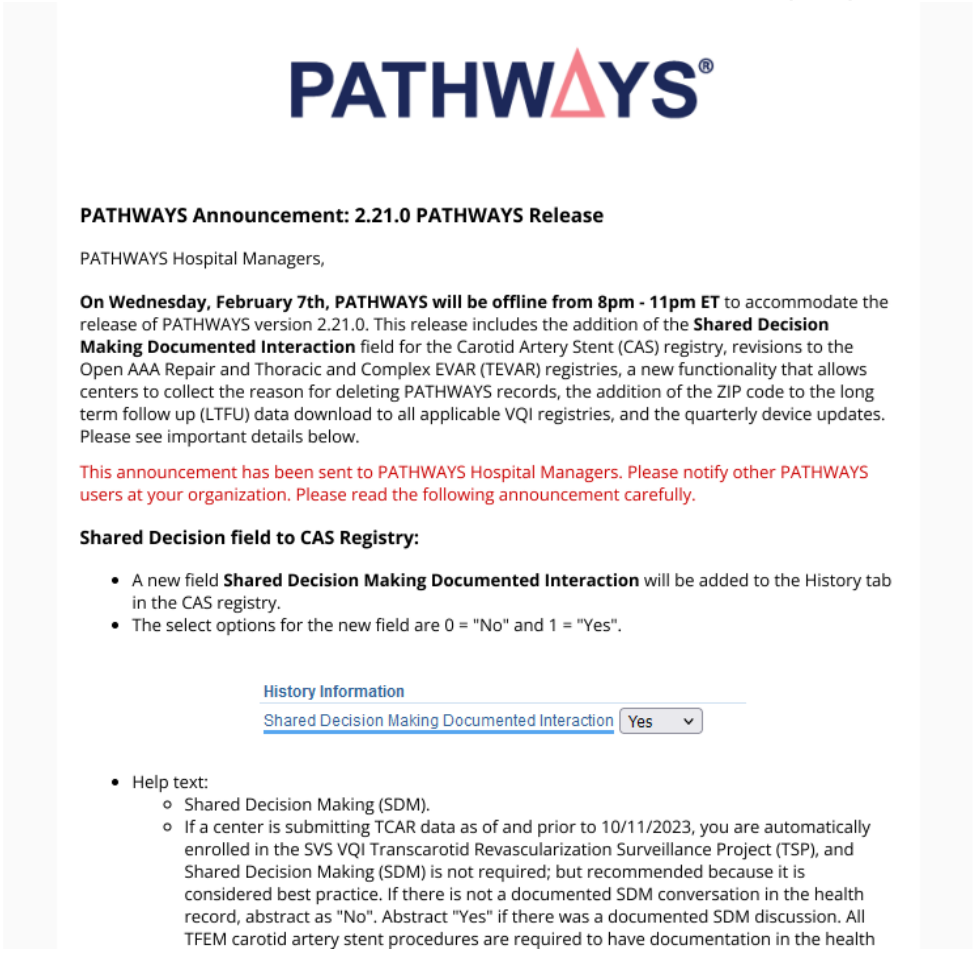
- **Video Library**
  Video tutorials to help you learn at your convenience.

PATHWAYS Support

Important Notifications

We will communicate release updates and revisions in multiple ways:

- All users with the role of Hospital Manager will receive an email and are alerted to share the notification with other PATHWAYS users at the organization.
- All users will be alerted with a bubble notification to view the New Release Note in the Support Tab. All prior release notes are available should you miss the alert.



PATHWAYS Announcement: 2.21.0 PATHWAYS Release

PATHWAYS Hospital Managers,

On Wednesday, February 7th, PATHWAYS will be offline from 8pm - 11pm ET to accommodate the release of PATHWAYS version 2.21.0. This release includes the addition of the **Shared Decision Making Documented Interaction** field for the Carotid Artery Stent (CAS) registry, revisions to the Open AAA Repair and Thoracic and Complex EVAR (TEVAR) registries, a new functionality that allows centers to collect the reason for deleting PATHWAYS records, the addition of the ZIP code to the long term follow up (LTFU) data download to all applicable VQI registries, and the quarterly device updates. Please see important details below.

This announcement has been sent to PATHWAYS Hospital Managers. Please notify other PATHWAYS users at your organization. Please read the following announcement carefully.

Shared Decision field to CAS Registry:

- A new field **Shared Decision Making Documented Interaction** will be added to the History tab in the CAS registry.
- The select options for the new field are 0 = "No" and 1 = "Yes".

History Information

Shared Decision Making Documented Interaction Yes

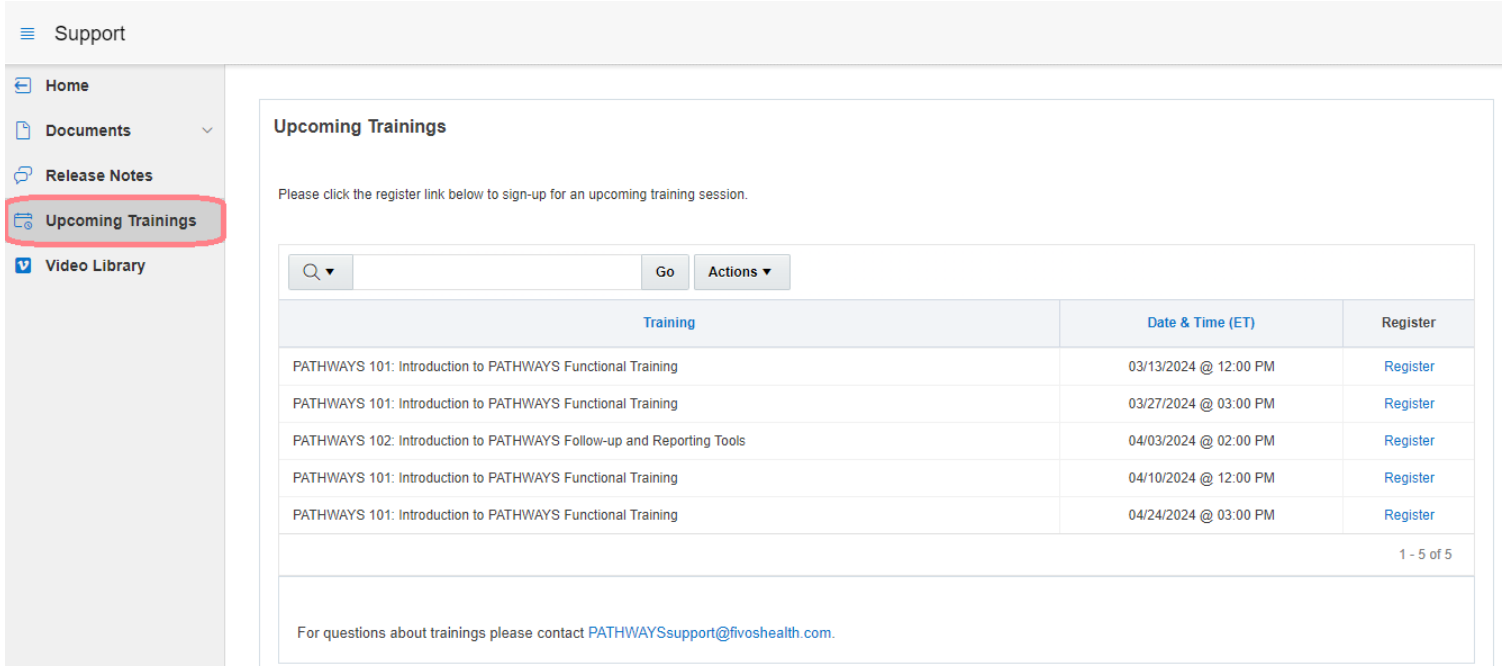
- Help text:
  - Shared Decision Making (SDM).
  - If a center is submitting TCAR data as of and prior to 10/11/2023, you are automatically enrolled in the SVS VQI Transcarotid Revascularization Surveillance Project (TSP), and Shared Decision Making (SDM) is not required; but recommended because it is considered best practice. If there is not a documented SDM conversation in the health record, abstract as "No". Abstract "Yes" if there was a documented SDM discussion. All TFEM carotid artery stent procedures are required to have documentation in the health

PATHWAYS Support

Training Schedule

The Support Team holds bi-monthly functional training webinars that provide an opportunity to have your functional questions answered by the Support Team.

Register today and reserve your spot at an upcoming training!

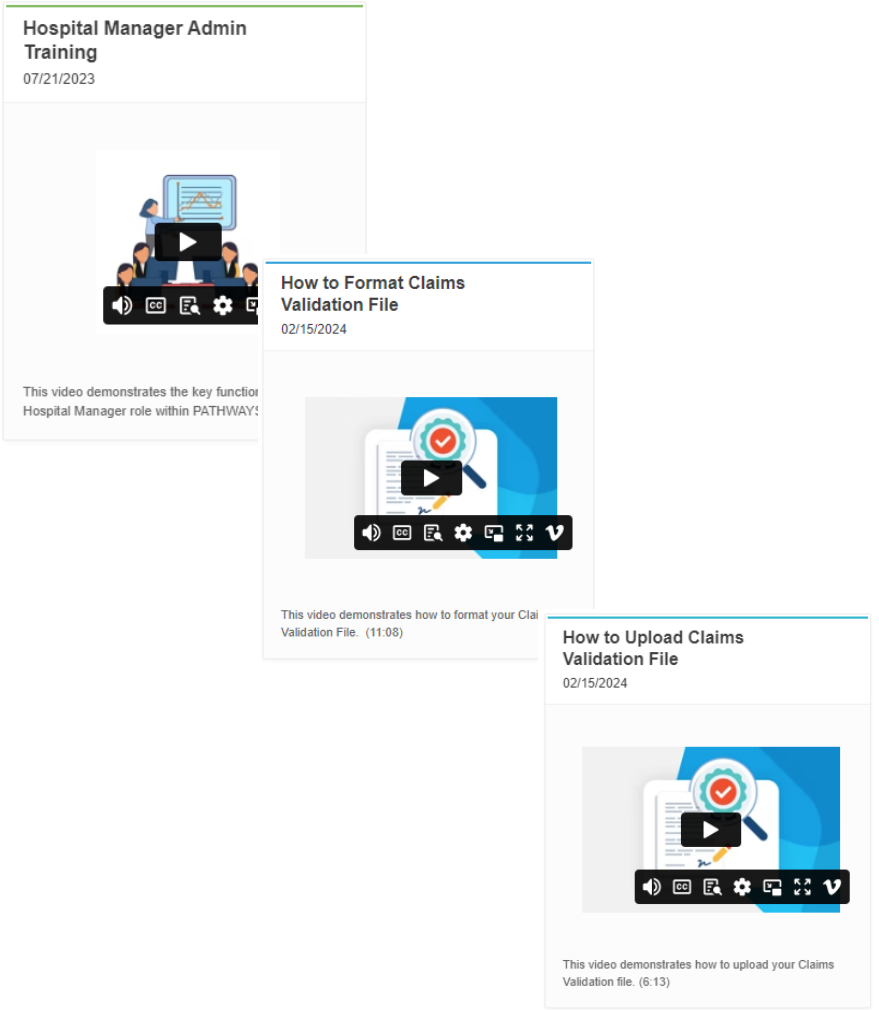


PATHWAYS Support

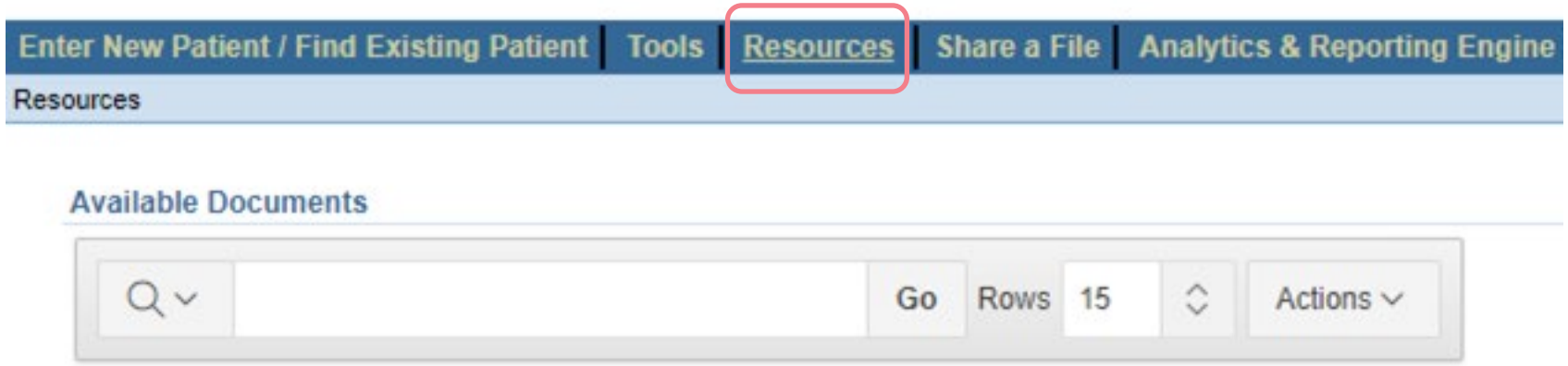
New Videos!

- Hospital Manager Admin Training
- How to **Format** Claims Validation File
- How to **Upload** Claims Validation File

As the Support Team continues to develop brief training videos, please share your feedback on videos you watch and let us know if you find them helpful.



PATHWAYS Support – Resources Tab



- Visit PATHWAYS Resources to access additional training guides and tools. For example:
  - Hospital Manager Guide
  - Recorded webinars and slide decks
  - User Manual
  - Technical FAQs, and more!

PATHWAYS Support

Coming Soon...

Next up in videos: 2-Factor Authentication

Did you know that PATHWAYS offers enhanced security for your account by enabling 2 Factor Authentication? For now, check out the user guide in Resources, and we'll have a video tutorial for you soon.

PATHWAYS Support and the SVS PSO are teaming up for webinars.

The support team looks forward to partnering with the SVS PSO to include brief support presentations as part of registry update webinars.

PATHWAYS Support

Claims Validation

The annual claims validation process is intended to ensure that all eligible cases have been captured in the registry and is a requirement of participation in the VQI. This process is a key component of the VQI's efforts to make certain registry data reflects real-world evidence.

The **2023** Claims Validation process will be launched in **April 2024**

- Centers will be notified via email with a request to provide the contact information for the individual responsible for completing the audit.
- Participating centers will be invited to a webinar providing an overview of the steps required for successful completion.
- PATHWAYS Support is here to help. Please reach out if your center is selected to participate and you need assistance.

PATHWAYS Support

By the way…

All these registries are available in the SVS VQI. Reach out to our Sales team for assistance with additional VQI registry opportunities at your Center.

- Carotid Artery Stent
- Carotid Endarterectomy
- Endovascular AAA Repair
- Hemodialysis Bypass
- IVC Filter
- Lower Extremity Amputations
- Open AAA Repair
- Peripheral Vascular Intervention
- Supra-Inguinal Bypass
- Thoracic and Complex EVAR
- Varicose Vein
- Vascular Medicine Consult
- Venous Stent

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Registry Projects

SVS Post-Market Surveillance Projects

- These projects are conducted within the SVS PSO and only non-identifiable data (removal of patient, center and physician information) will be provided to Endologix/Cook/Gore or the FDA. Only standard of care practice is being evaluated. For such PSO activities, patient informed consent and Institutional Review Board review are not required.

- Sites must follow their institutional guidelines.

TEVAR Dissection Surveillance Project

- The SVS PSO is excited to announce the continuation of the TEVAR Dissection Surveillance Project to evaluate the Cook Zenith Dissection Endovascular System. FDA approval was granted for this device after safety and effectiveness were demonstrated in pre-market studies of complicated dissection with the proviso that the efficacy of TEVAR treatment of descending aortic dissection would be more fully analyzed through post-market surveillance, as was done through VQI for the W. L. Gore and Medtronic devices after their approval.
- Patients will have 30 day, and annual visits for 5 years.
- Total reimbursement of $4,000 per patient for a patient followed annually for 5 years.

For enrollment information: Sarah Van Muyden | sarah.vanmuyden@fivoshealth.com

TEVAR Dissection Surveillance Project – Cook Only

- 125 of the 180 required patients enrolled (4 potential cases in process)
- 60 Chronic Cases Enrolled - Enrollment Complete
- 65 Acute Cases Enrolled Currently -54% of total Acute Cases Enrolled
- Retrospective enrollment allowed- All eligible cases from December 31, 2018 (protocol FDA approval date)
- (100) 30-Day visits completed (1)in progress, (87) 1-year follow-up visits completed (2) in progress, (78) 2-year follow-up visit completed(1) in progress,(27) 3-year follow up visits completed(1) in progress, (7) 4-year follow up visits completed (0) in progress
- 28 sites currently participating-4 new invitations sent out, 1 new fully executed addendum
- This project is conducted within the SVS PSO and only non-identifiable data (removal of patient, center and physician information) will be provided to Cook or the FDA. Only standard of care practice is being evaluated. For such PSO activities, patient informed consent and Institutional Review Board review are not required.

Gore TBE Project

Gore is collaborating with the Society for Vascular Surgery Vascular Quality Initiative (VQI) to collect data and images from the **TEVAR** registry for a 10 year follow-up project.

Project Objective: To ensure that the clinical outcomes during the commercial use of the GORE® TAG® Thoracic Branch Endoprosthesis are as anticipated.

Patient Population: Patients who undergo treatment with the GORE® TAG® Thoracic Branch Endoprosthesis device.

Number of Patients

- Max number of patients: 350
- Start Date 01/15/2023

About the Gore TBE Project

Project specific dynamic content has been added to the TEVAR registry.

Project Timeline:

- **Phase I**: Start-up, development, enrollment (3 years) Current Phase
- **Phase II**: Surveillance period (10 years)
- Total expected duration of the project: (13 years)

Project Imaging Requirements: Procedure + 1 Month + Annually

Gore TBE Project

- 30 fully executed addendums
- 28 sites full trained
- Current enrollment as of 02/21/24 = 260

For enrollment information:
Megan Henning
megan.henning@fivoshealth.com

Upcoming Projects-Endologix

DETOUR Project-Percutaneous Transluminal Arterial Bypass (PTAB) Procedure for the PVI Registry(As of 03/04/24)

-16 Sites invited, 1 site contracted, 1 site trained

LEAF Project-Endovascular EVAR Registry

-10 Sites invited, 2 Contracted, 1 declined

Fall Report Reminder

SVS | VQI
In collaboration with NCDR®

Fall 2024 Report Cut Date = August 1, 2024, for procedure dates of July 1, 2023 – June 30, 2024

Submit by 7/31/2024 @ 23:59:59 CT

Fall 2024 Regional Meeting

In Conjunction with CSVS

September 13 or 14, 2024

Delta Hotels

St. John's Conference Centre

St. John's, NL

CE/CME Credit

- Click on link to complete attendance attestation & evaluation
- Seven (7) calendar days - including meeting day - to complete above documents
- No reminders; nothing granted retroactively
- Record of meeting attendance is required
- **Must** have active PATHWAYS account
- Approximately two weeks after meeting, DMU will send non-physician attendee's instructions on how to access credit certificate

https://dmu.co1.qualtrics.com/jfe/form/_bjE2IG260v99reu

Provided by Des Moines University (DMU)

SVS Society for Vascular Surgery | American Venous Forum | fivos | Society for Vascular Medicine | VASA | SVU

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CE/CME Credit – ABS Transfer (Physicians only)

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- DMU will submit credit to the American Board of Surgery (ABS)
- Following fields must be provided on attestation/evaluation only if credit is to be transferred to ABS
  - First and last name as it appears in your ABS record
  - Date of birth – month and day
- Wait eight (8) weeks from activity date prior to reviewing transcript

Questions? Contact cme@dmu.edu

- Thank you to our members for your continued participation and support of VQI

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- Thank you to COOK and GORE for your contributions and making these meetings possible

- Thank you to Des Moines University for providing CE/CME credit for today's meeting

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Thank You

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