


**Neil Khilnani, MD**  
 Weill Cornell Medicine – New York Presbyterian Hospital

**On behalf of the EMBOLIZE Investigators**  
 PI: Drs. Ronald Winokur and Gloria Salazar







*Investigator initiated and led*

**Randomized Controlled Trial**

**venous embolization vs venography alone**

*for venous origin chronic pelvic in women*


  



**Disclosures:**

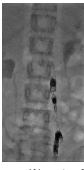
**Speaker:** Medtronic, Cook, Penumbra

**Grant Support:** Society for Interventional Radiology Foundation




**Research Question**

**Does pelvic and ovarian vein embolization benefit women with venous origin chronic pelvic pain?**




Video courtesy of Dr. Ron Winokur




**Rationale**

- Data supporting embolization for S<sub>2</sub>V<sub>2</sub>
  - **Compelling**
  - **Methodologically insufficient to gain**
    - GYN endorsement
    - Insurance coverage
- **EMBOLIZE - designed to address this gap**



Clinicaltrials.gov




**Population**

**Inclusion**

- Female ≥18 years old
- S<sub>2</sub> - Venous origin CPP >6 months
- V<sub>2</sub> - Presence of pelvic varices
  - ≥1 veins
  - >5 mm diameter
- Ovarian vein diameter ≥6 mm
- SVP classifications:
  - S<sub>1</sub>V<sub>2</sub>P<sub>0</sub>U<sub>0</sub>R<sub>0</sub>N<sub>0</sub>T
  - S<sub>1</sub>S<sub>2</sub>P<sub>0</sub>U<sub>0</sub>R<sub>0</sub>N<sub>0</sub>T
  - S<sub>1</sub>V<sub>2</sub>P<sub>1</sub>U<sub>0</sub>R<sub>0</sub>N<sub>0</sub>T

**Exclusion**

- Significant iliac or renal vein stenosis
- Other pelvic pain treatment during the study
- Postmenopausal
- Prior
  - Hysterectomy
  - Embolization or stent
- Post thrombotic



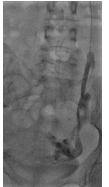
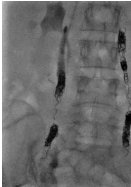
### Study cohorts

**Intervention**

- Venography + embolization
  - Pelvic varicose veins
    - Sclerosant
  - Both ovarian veins
    - Coils + sclerosant


**Comparator**

- Venography alone
  - Blinded patients
  - Treatment sham

Varicose vein sclerosis      Coil embolization

Images courtesy of Dr. Ron Winkur



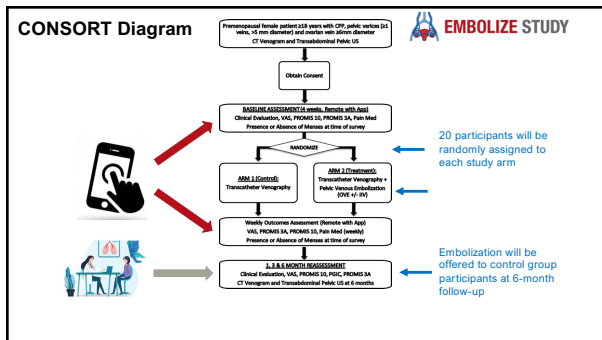
### Outcomes


Primary  
Endpoint

Difference in

**Visual Analog Scale  
pain score**

at 6 months






### Where we are now

- March 2024: Funding from SIR Foundation
- Study Level IRB approval
- Weill Cornell IRB/Contracting approval
- Current: Contracting in progress at four sites
- Dec 2024-Jan 2025: First enrollments

**Sites**

- Weill Cornell Medicine
- University of North Carolina
- Lake Washington Vascular
- Northwestern University
- Massachusetts General Hospital




### Embolization is 100% covered by study

Control patients offered embolization at 6 months

### Refer Patients to EMBOLIZE

**Contact:**

- Ronald Winkur, MD at [rsw9004@med.cornell.edu](mailto:rsw9004@med.cornell.edu) or
- Gloria Salazar, MD at [gloria\\_salazar@med.unc.edu](mailto:gloria_salazar@med.unc.edu)



Scan to refer patients