

# Clinical Outcome of Adolescent Sub-Clinical Varicoceles from a Single-Institution Experience

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# Subclinical Varicoceles

- Abnormality of pampiniform plexus detected during scrotal US
- No consensus on precise definition
- Diagnosis often based on:
  - Venous dilation or retrograde venous blood flow on US
  - Absence of clinically palpable ipsilateral varicocele
- Unclear clinical significance
- Variable management



# Study Goals and Objectives

- Examine natural history of subclinical varicoceles diagnosed in tertiary care center
- Outcomes
  - Resolution or progression to clinical varicoceles
  - Impact on testicular volume
  - Need for surgery



# Methods

- Single institution experience
- Retrospective review
- IRB-approved, outpatient urologic consultation database
- Designated as “subclinical varicocele”
- Initial visit October 1999 through July 2013
- Follow-up through October 2014
- US studies with available images reviewed by single radiologist



# Inclusion Criteria

- Available records and US images
- Absence of palpable ipsilateral clinical varicocele
- No prior varicocele or inguinal surgery
- US criteria
  - Dilation of pampiniform venous plexus
  - Involving 2 or more vessels
  - Vessel diameter  $\geq 2.5\text{mm}$  (with or without Valsalva maneuver)

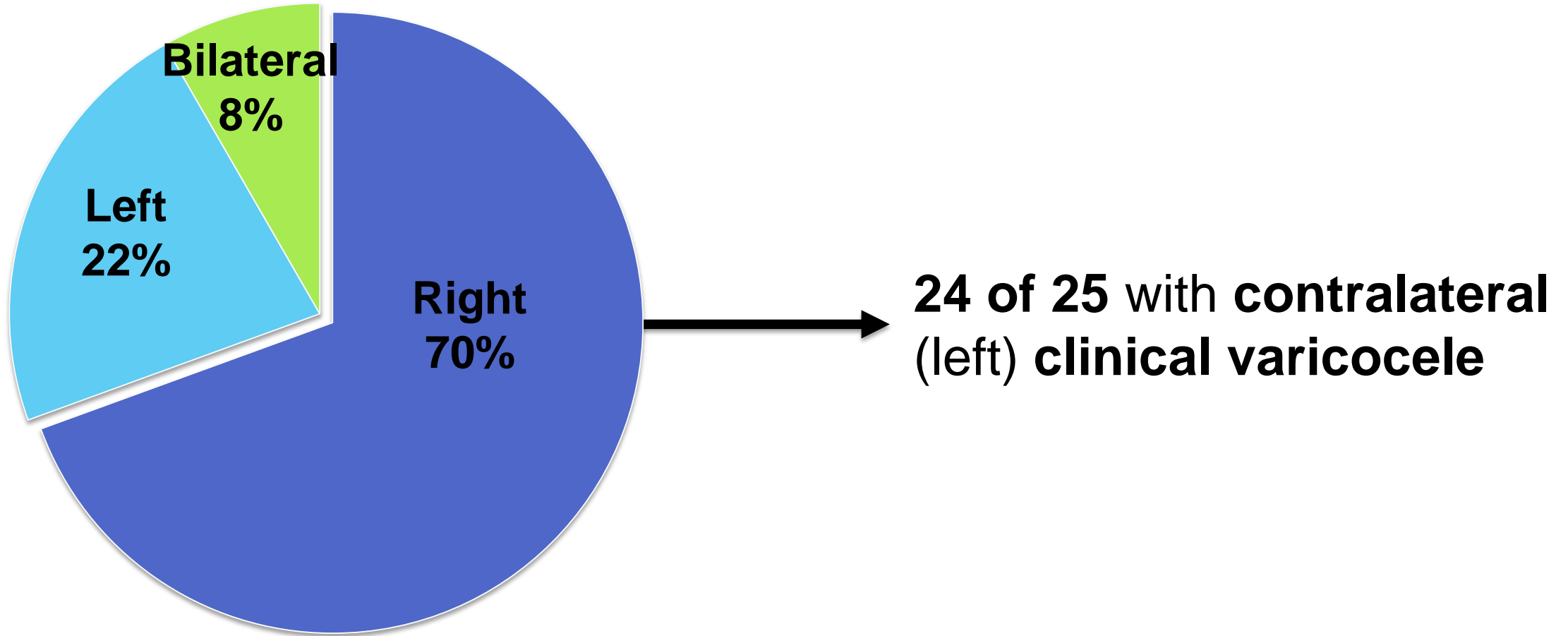


# Patient Demographics

- 98 patients identified → **36 patients** confirmed
- Age at initial visit = 15.5 years (mean)
  - Range: 8.8 – 21.5 years
- Follow-up duration = 26.5 months (mean)
  - Range: 1 – 86 months

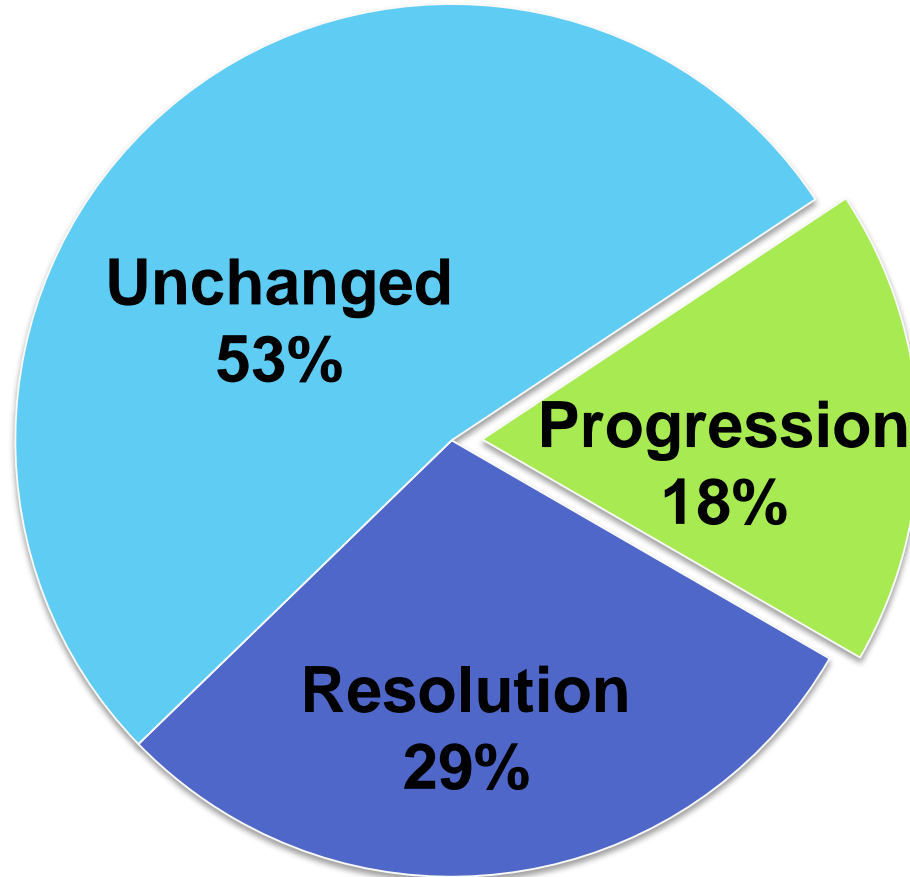


# Right Side Predominance, Often with Contralateral Clinical Varicocele



# Subclinical Varicoceles Appear Unlikely to Progress

**17 patients** with follow-up clinical evaluation and US



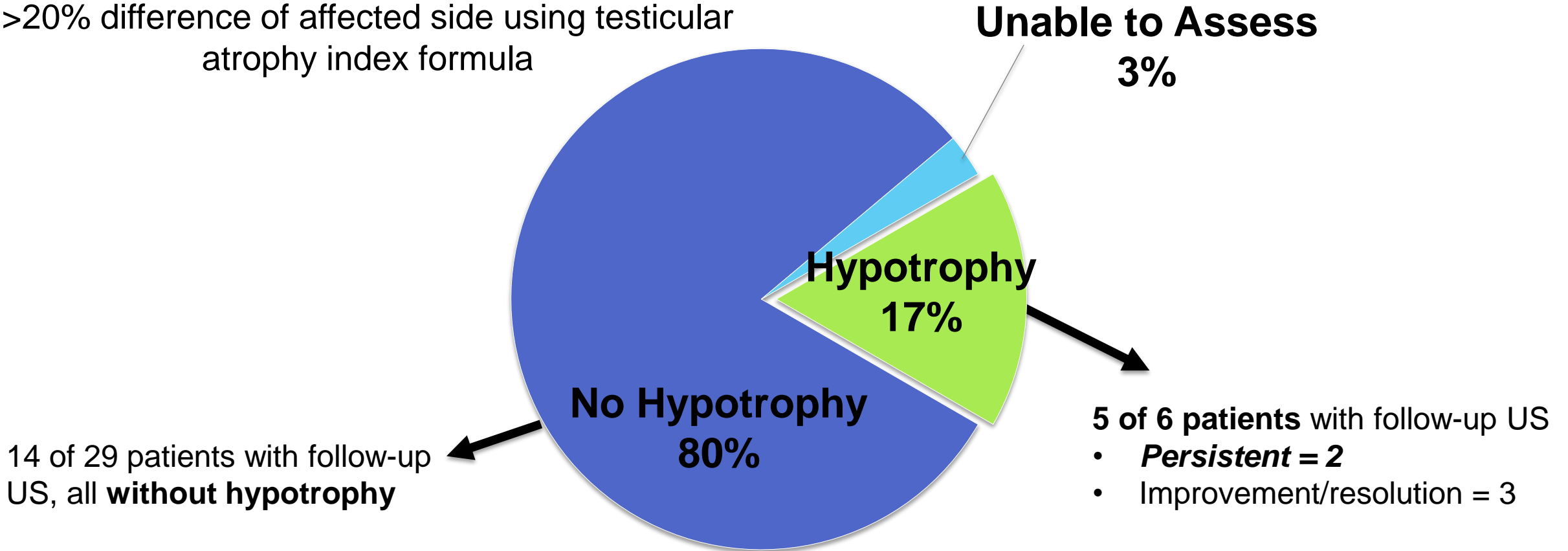
**None** underwent surgery



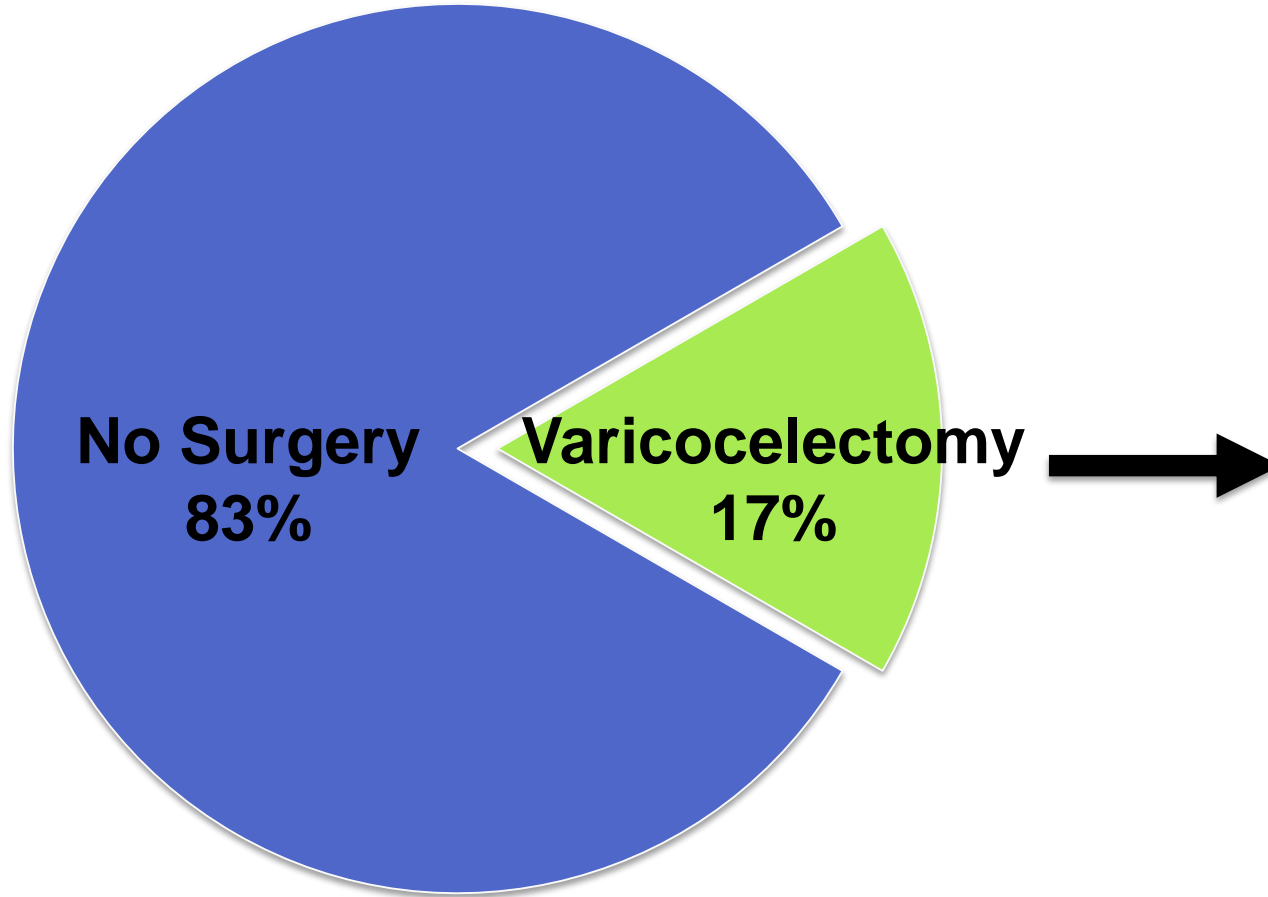
# Majority without Impact on Testicular Volume

## Hypotrophy on Initial US

>20% difference of affected side using testicular atrophy index formula



# Majority Do Not Undergo Surgical Correction



## 6 patients underwent surgery

- Contralateral clinical varicocele *only* = 4
- Bilateral procedure = 2
  - *No evidence of progression to clinical varicocele*



# Summary and Conclusions

- Most subclinical varicoceles were **right sided**
- Identified in patients with **contralateral clinical varicocele**
- **Unlikely to progress** to clinical varicocele or **to require surgery**
- Does **not** appear to **impact testicular volume**
  
- May indicate incidental nature
- Information guide future prospective studies to better define clinical management strategies





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