Challenges in Diagnosis and Management of Gonadal Torsion in New York State

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INTRODUCTION

- Diagnosing gonadal torsion (GoT) is time sensitive because of the short window of opportunity to attempt organ-saving vs. resection treatments.
- Other than anatomical differences in male and female reproductive systems that could majorly contribute to the gender disparities in diagnosing GoT, earlier studies reported significantly higher rates of organ resection treatments, especially for women.
- **We aimed to examine trends in the management of diagnosed GoT cases in New York State (NYS) from a population based data registry and identify risk factors for organ loss.**

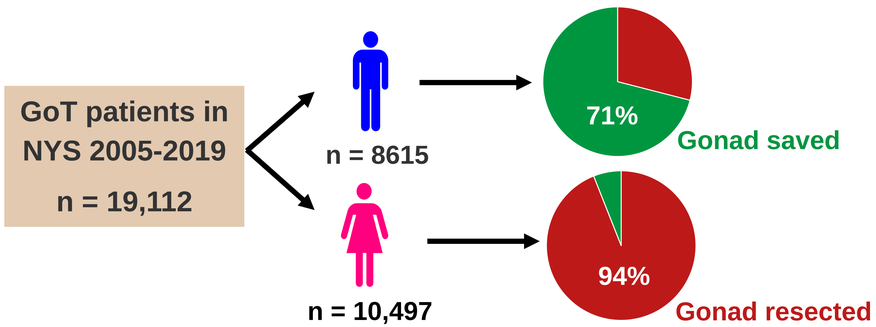
METHODS

- We queried the NYS's Statewide Planning and Research Cooperative System (SPARCS), using ICD and CPT codes to identify male and female patients treated for GoT between 2005 and 2019.
- Patients treatments were categorized as gonad resection or gonad saving treatments based on the billing codes for procedures performed.
- We used chi-square and Wilcoxon rank sum tests to test for differences in patient factors associated with gonad resection vs saving treatments
- We explored variations in pathways to care from initial presentation to treatment to understand factors responsible for potential delays including hospital size and location and provider specialty.

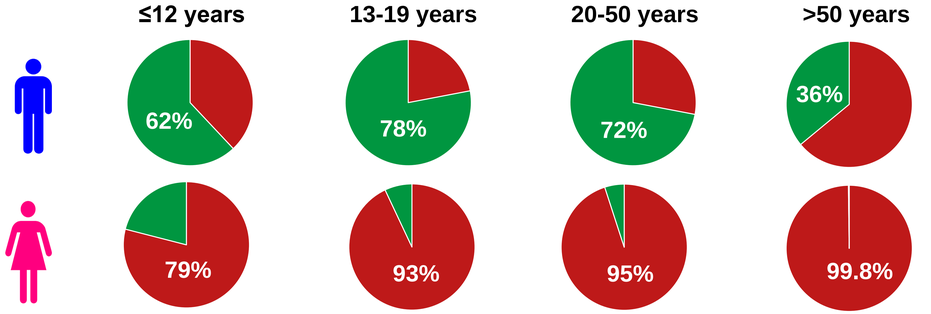
KEY FINDINGS

- Female GoT patients across all ages had a much higher proportion of resection treatments than male GoT patients
- Compared to adolescent and adult male GoT patients, pre-adolescent male GoT patients were less likely to receive gonad saving treatments
- Most (68%) of the female GoT were associated with cysts or benign/malignant tumors
- Other than gender, race, insurance type and rurality also affected treatment for GoT
- Standardizing diagnosis and treatment practices across emergency and non-emergency presentations could help in improving outcomes for GoT patients

STUDY SAMPLE



RESULTS

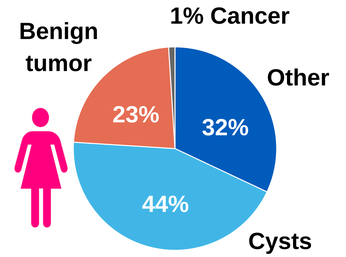


Gonad saving treatments varied by age and gender. However, across all ages, female patients had much lower proportion of gonad saving treatments compared to male patients

Variable	Gonad removed	Gonad saved
Male Gonadal Torsion		
Race		
White	45	48
Black	**28**	**24**
Other	26	27
Public insurance	**33**	**23**
Private insurance	**53**	**61**
Female Gonadal Torsion		
Race		
White	**57**	**52**
Black	17	17
Other	**27**	**31**
Rural patients	**7**	**3**

Statistically significantly different demographic factors

- Black men and male patients with public insurance were less likely to receive gonad saving treatments
- White women and rural female patients were less likely to receive gonad saving treatments



Majority (68%) of female patients had presence of cysts or benign /malignant or tumors at the time of treatment for gonadal torsion

Questions/comments
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