

PEDIATRIC THYROID CANCER MULTIDISCIPLINARY TEAM IMPROVES ADHERENCE OF RADIOACTIVE IODINE TREATMENT ACCORDING TO NATIONAL GUIDELINES

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SUMMARY

Objective. Does a multidisciplinary team (MDT) improve adherence to 2015 American Thyroid Association (ATA) postoperative surveillance guidelines in pediatric thyroid cancer patients?

Methods:
Data Collected
1. Timing of postoperative thyroglobulin (Tg) tests
2. Iodine-123 (^{123}I) diagnostic scans
3. Iodine-131 (^{131}I) administration
4. The number of endocrinologists involved in care

Results:
MDT achieved
1. ^{131}I ablation in fewer low-risk patients ($p = .04$)
2. More patients appropriately received postoperative Tg tests or ^{123}I diagnostic scans
3. Fewer endocrinologists involved in care

Discussion. Introduction of an MDT improves care of pediatric thyroid cancer patients.

INTRODUCTION

Prior to 2015, postoperative management was based on adult protocols.^{1,2}

The 2015 ATA guidelines stratify patients by risk and recommend an MDT.³

MDT introduced January 2021.



METHODS

Patient Selection

Charts of pediatric thyroid cancer patients who received thyroidectomy between 2017 and 2024

Data Collection

Timing of post-op Tg tests, ^{123}I diagnostic scans, ^{131}I administration, and the number of endocrinologists involved in care

Analysis

2017 to 2020 (pre-MDT) were compared to those treated from 2021 to 2024 (post-MDT)

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RESULTS

Table 1. Patient Demographic and Characteristics by Year Group

	2017-2020 (n = 28)	2021-2024 (n = 19)	P value
ATA risk status			
Low	11	6	.76
Intermediate	3	5	.24
High	14	8	.77
Median age in years (IQR) [range]	15 (3) [12]	15 (4) [13]	.46
Gender			
Female	23	15	1.0
Cancer type			
PTC	27	18	1.0
FTC	1	1	1.0

Abbreviations: ATA, American Thyroid Association; FTC, follicular thyroid cancer; IQR, interquartile range; PTC, papillary thyroid cancer.

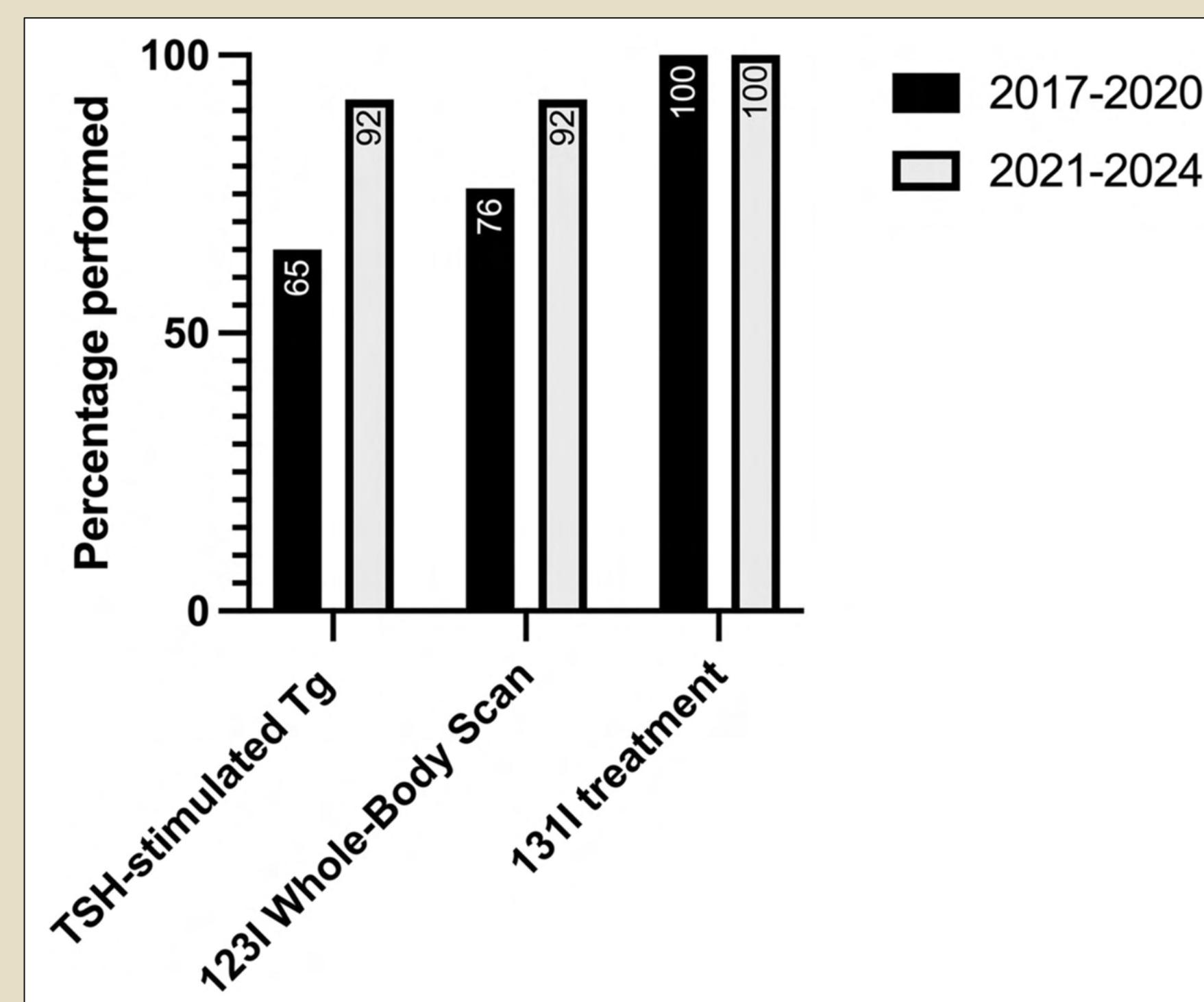


Figure 1. Changes in the performance of TSH-stimulated Tg testing, ^{123}I whole-body scans, and ^{131}I treatment in those indicated according to ATA guidelines.

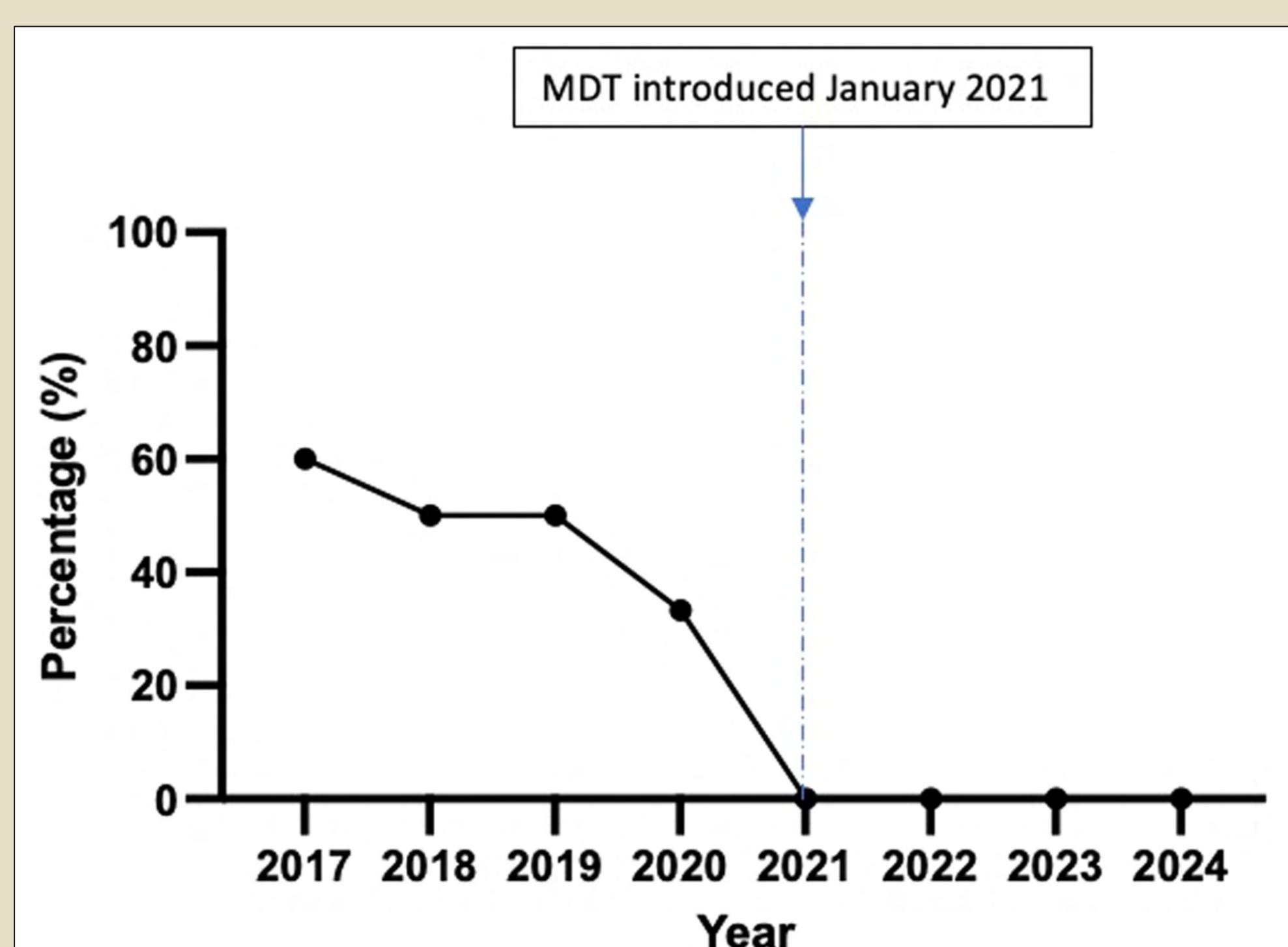


Figure 2. The percentage of low-risk patients receiving iodine-131 treatment before and after the introduction of the multidisciplinary team (MDT).

CONCLUSIONS

- 1. Fewer patients received RAI in the form of ^{123}I ($p = .4$) and ^{131}I ($p = .04$) where it was not indicated
- 2. Radiation exposure and its associated risks such as an increased rate of future malignancies and cerebrovascular disease are reduced^{4,5,6,7,8}

- 1. Significantly fewer endocrinologists were involved in the postoperative care ($p = .02$)
- 2. Studies indicate that fewer points of contact when a large MDT is involved can streamline patient care and improve outcomes⁹⁻¹¹

- 1. A higher percentage of patients had postoperative TSH-stimulated Tg performed in accordance with ATA guidelines³

IMPLICATIONS FOR PRACTICE

Introduction of a pediatric thyroid MDT in 2021

A significant decrease in low-risk patients treated with ^{131}I therapy.

An increase in the percentage of appropriate postoperative Tg tests.

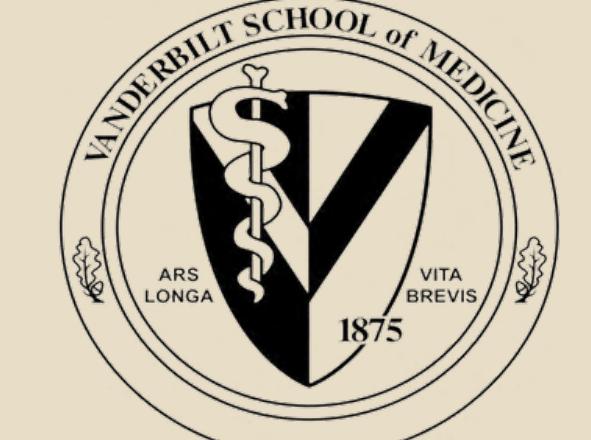
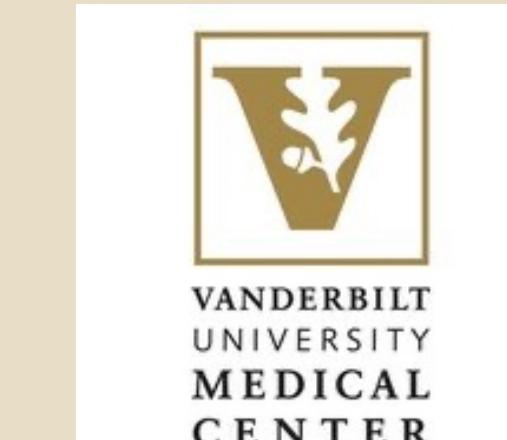
An increase in the percentage of appropriate ^{123}I diagnostic scans.

The sharing of expertise in an MDT:

1. Facilitates discussion around optimal postoperative treatment plans in line with established protocols
2. Improves adherence to ATA guidelines

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