

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 (<sup>123</sup>I) diagnostic scans
  - 3. Iodine-131 (<sup>131</sup>I) administration
  - 4. The number of endocrinologists involved in care

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

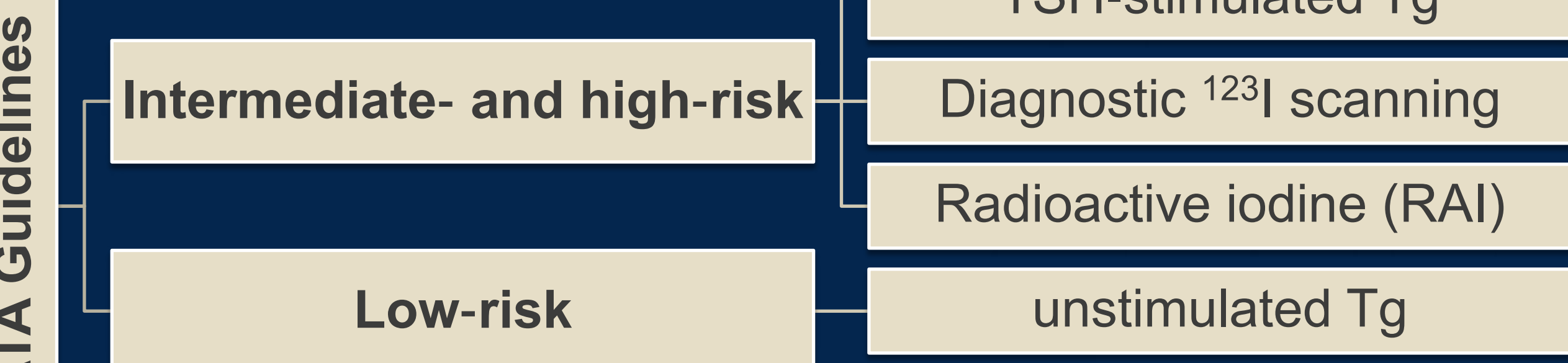
**Discussion.** Introduction of an MDT improves care of pediatric thyroid cancer patients.

INTRODUCTION

Prior to 2015, postoperative management was based on adult protocols.<sup>1,2</sup>

The 2015 ATA guidelines stratify patients by risk and recommend an MDT.<sup>3</sup>

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, <sup>123</sup>I diagnostic scans, <sup>131</sup>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.

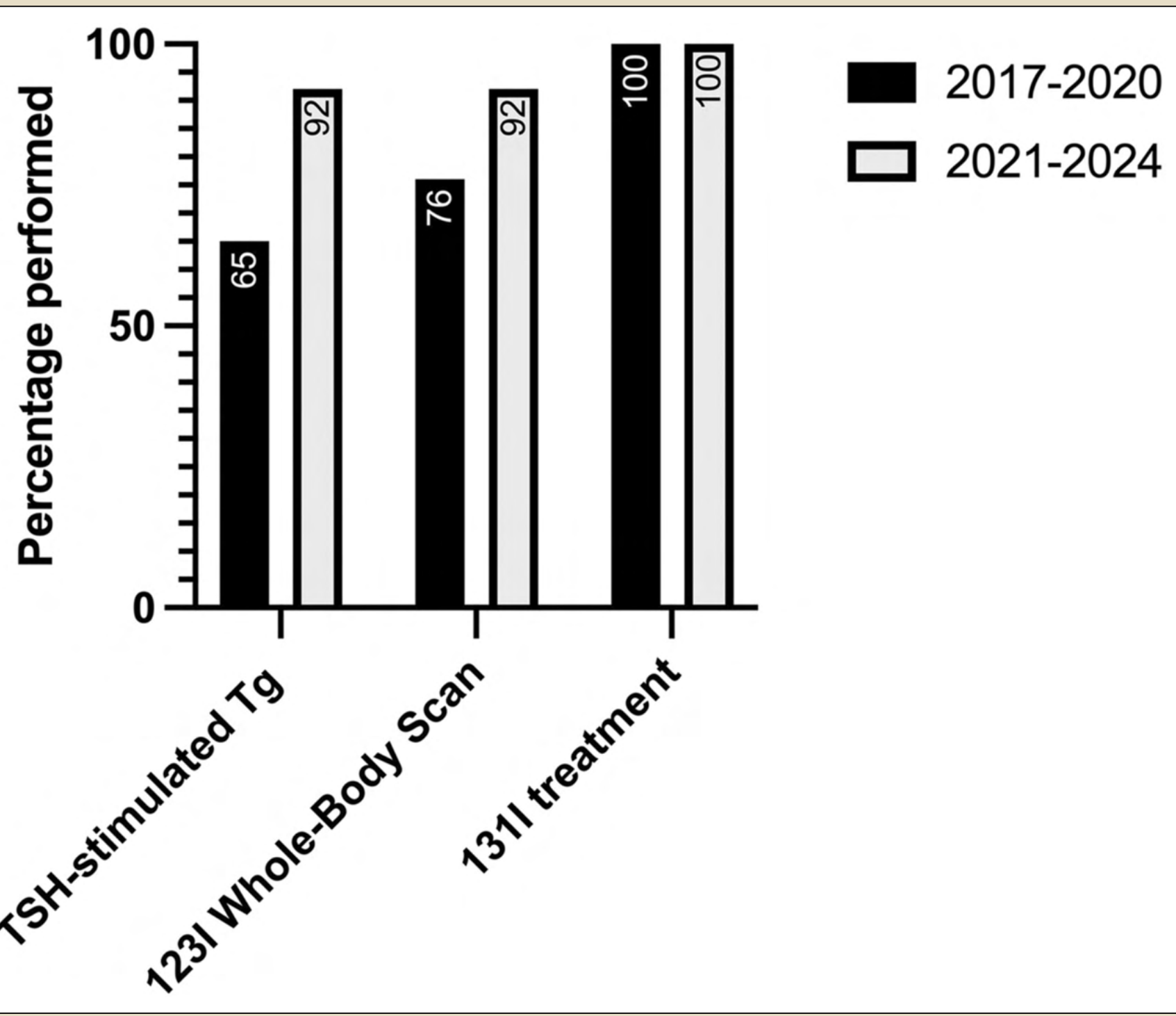


Figure 1. Changes in the performance of TSH-stimulated Tg testing, <sup>123</sup>Iodine whole-body scans, and <sup>131</sup>Iodine treatment in those indicated according to ATA guidelines.

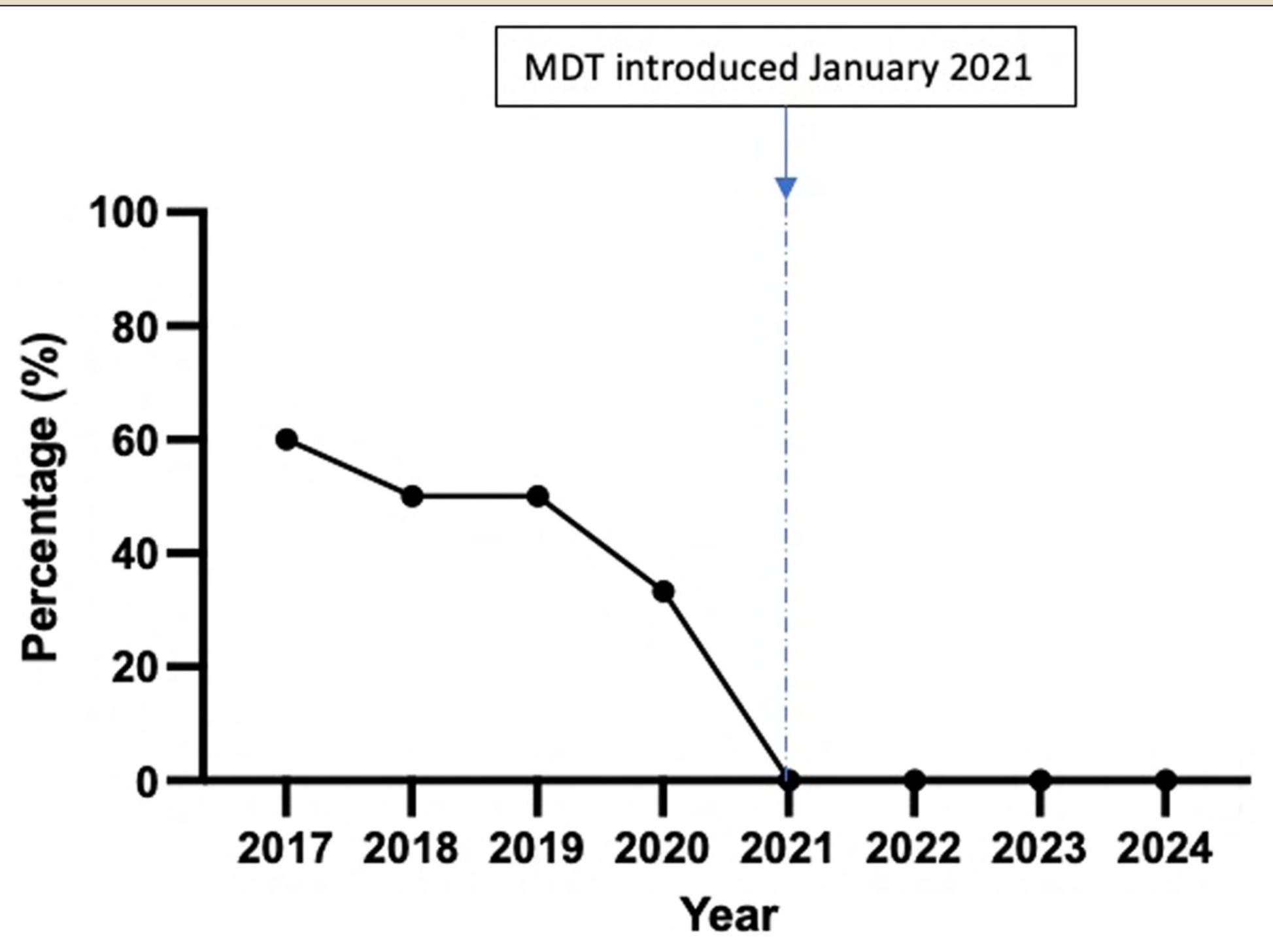
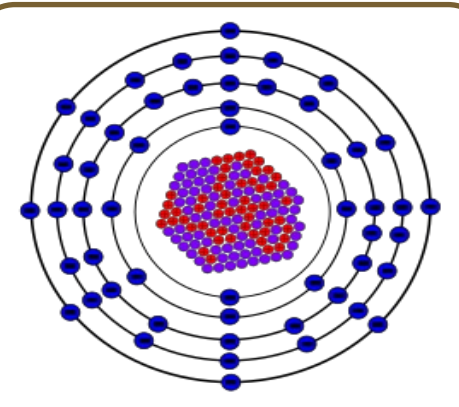
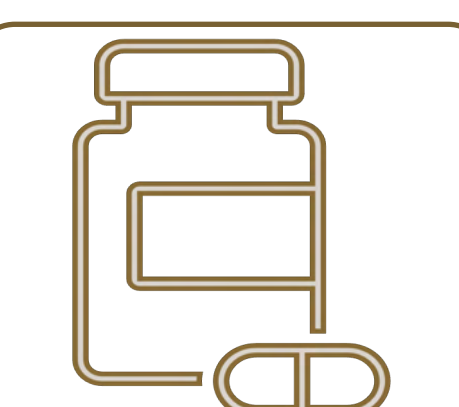


Figure 2. The percentage of low-risk patients receiving iodine-131 treatment before and after the introduction of the multidisciplinary team (MDT).

CONCLUSIONS



- 1. Fewer patients received RAI in the form of <sup>123</sup>I (p= .4) and <sup>131</sup>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<sup>4,5,6,7,8</sup>

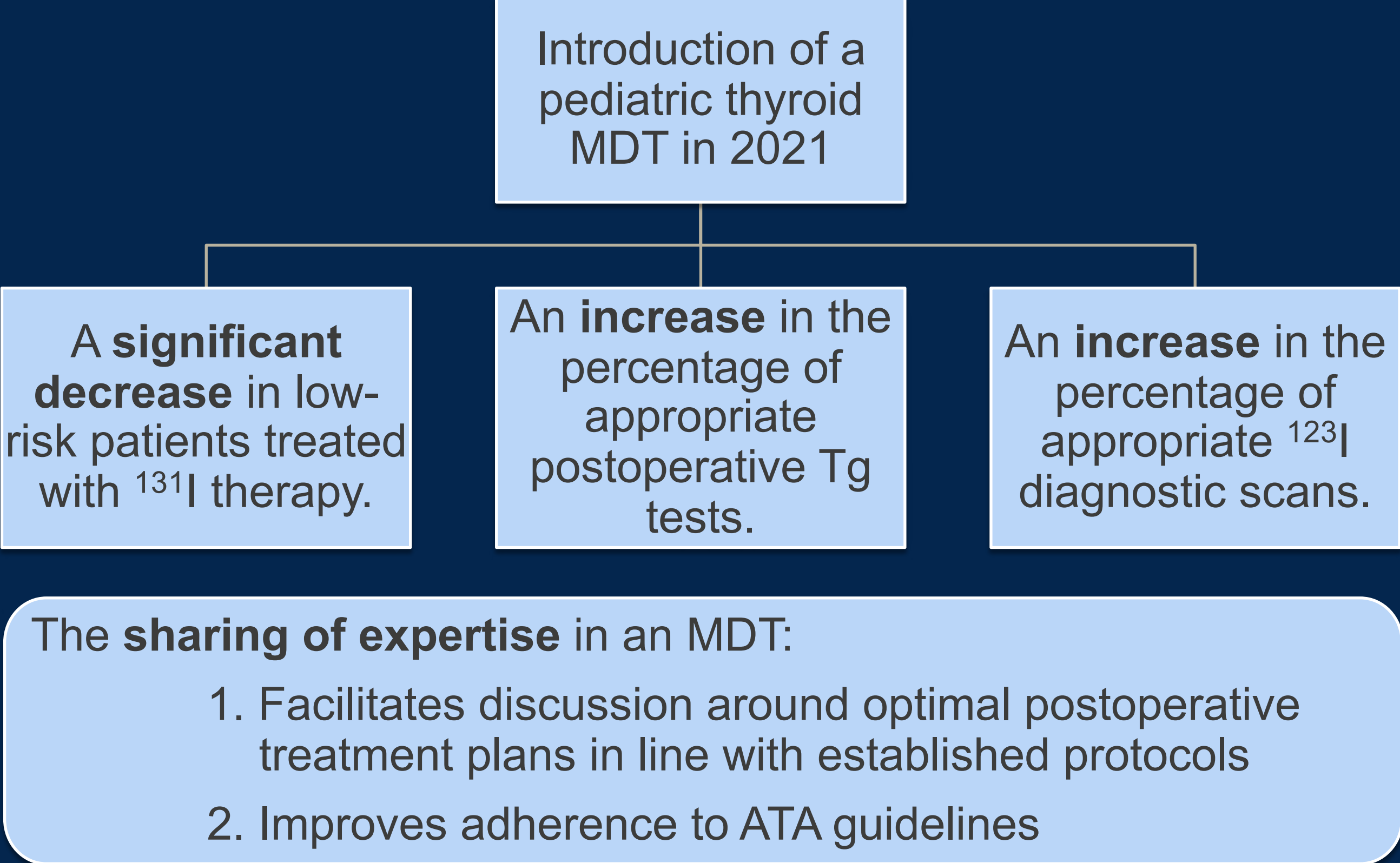


- 1. Significantly fewer endocrinologists were involved in the postoperative care (p = .02)
- 2. Studies indicate that fewer points of contact when a large MDT is involved can streamline patient care and improve outcomes<sup>9-11</sup>



- 1. A higher percentage of patients had postoperative TSH-stimulated Tg performed in accordance with ATA guidelines<sup>3</sup>

IMPLICATIONS FOR PRACTICE



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