



# Current Clinical Practice Pattern In Routine Deficient DNA Mismatch Repair Tests To Identify Patients Who Are Appropriate For Immunotherapy

– Internet Questionnaire Across Japanese Oncology Societies –

**Saori Mishima<sup>1)</sup>, Hiroya Taniguchi<sup>1)</sup>, Yasuhiro Kodera<sup>2)</sup>, Takayuki Yoshino<sup>1)</sup>**

1) Department of Gastrointestinal Oncology, National Cancer Center Hospital East

2) Department of Gastrointestinal Surgery, Nagoya University

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## **Disclosure of Conflict of Interest**

*Name of first author: Saori Mishima*

I have no COI  
with regard to our presentation.

# Backgrounds

- An anti-PD-1 immune checkpoint inhibitor was established for the treatment of deficient DNA Mismatch Repair (dMMR) advanced/recurrent solid tumors<sup>1)2)</sup>.
- In December 2018, pembrolizumab was approved and reimbursed in Japan for this tumor-agnostic indication.
- This decision potentially affects current clinical practice pattern.
- A little is known about current clinical practice pattern in routine dMMR tests to identify patients who are appropriate for immune checkpoint inhibitors.

1) Diaz LA. et al. *Ann Oncol.* 2019; 30(suppl\_5): 11740

2) Lenz HJ. et al. *JCO.* 2019; 37(suppl\_15): 3521

# Objective

- The objective of this survey is to better understand current clinical practice patterns for MSI / MMR tests to identify patients that are appropriate for immune checkpoint inhibitors.

# Methods

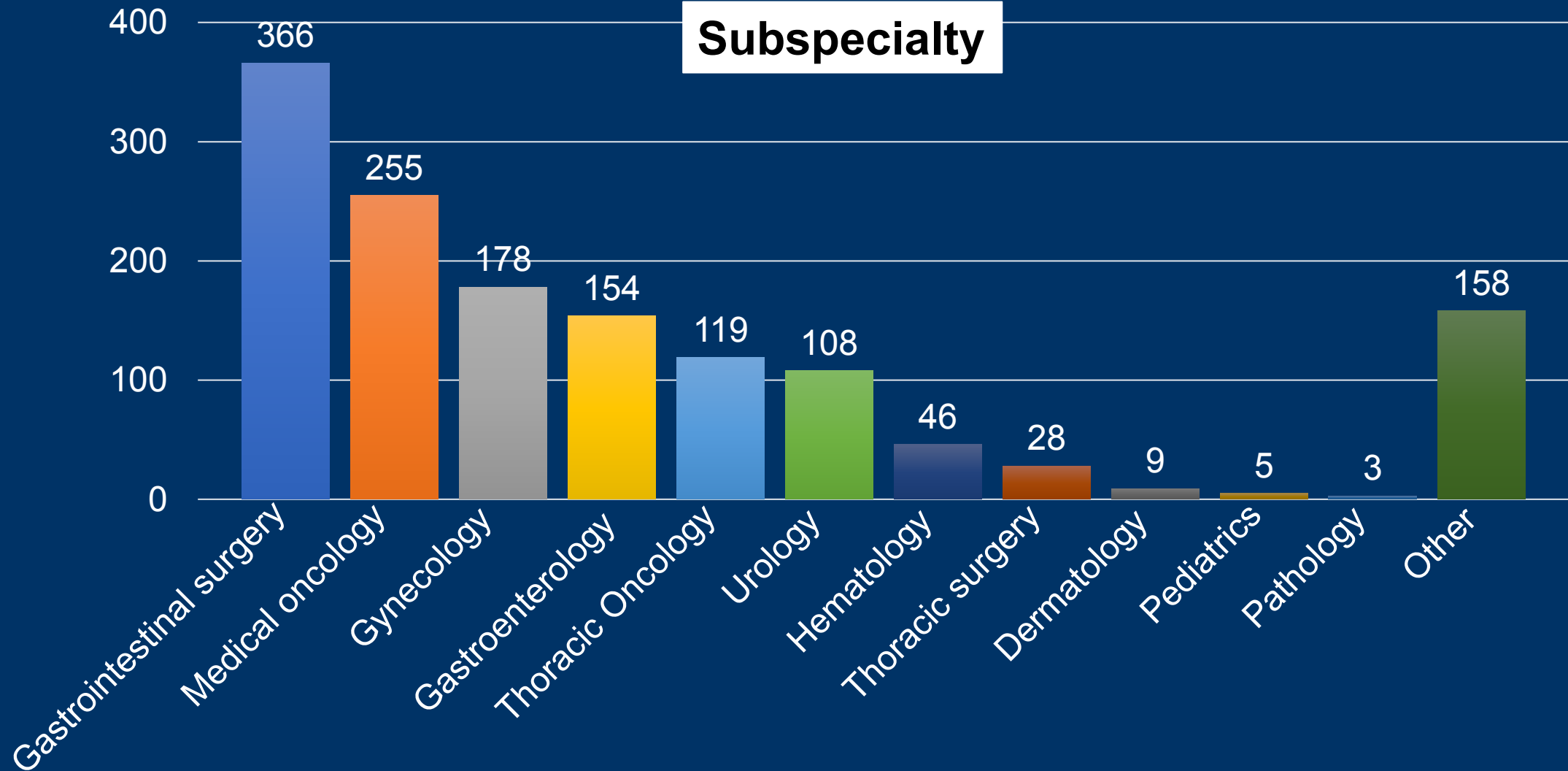
- Official internet questionnaire was conducted from January 15th to February 15th in 2019 toward physician members in Japan Society of Clinical Oncology (JSCO) and Japanese Society of Medical Oncology (JSMO).

# Survey Results

- Total response: 1,325 physicians

\*Multiple answers allowed

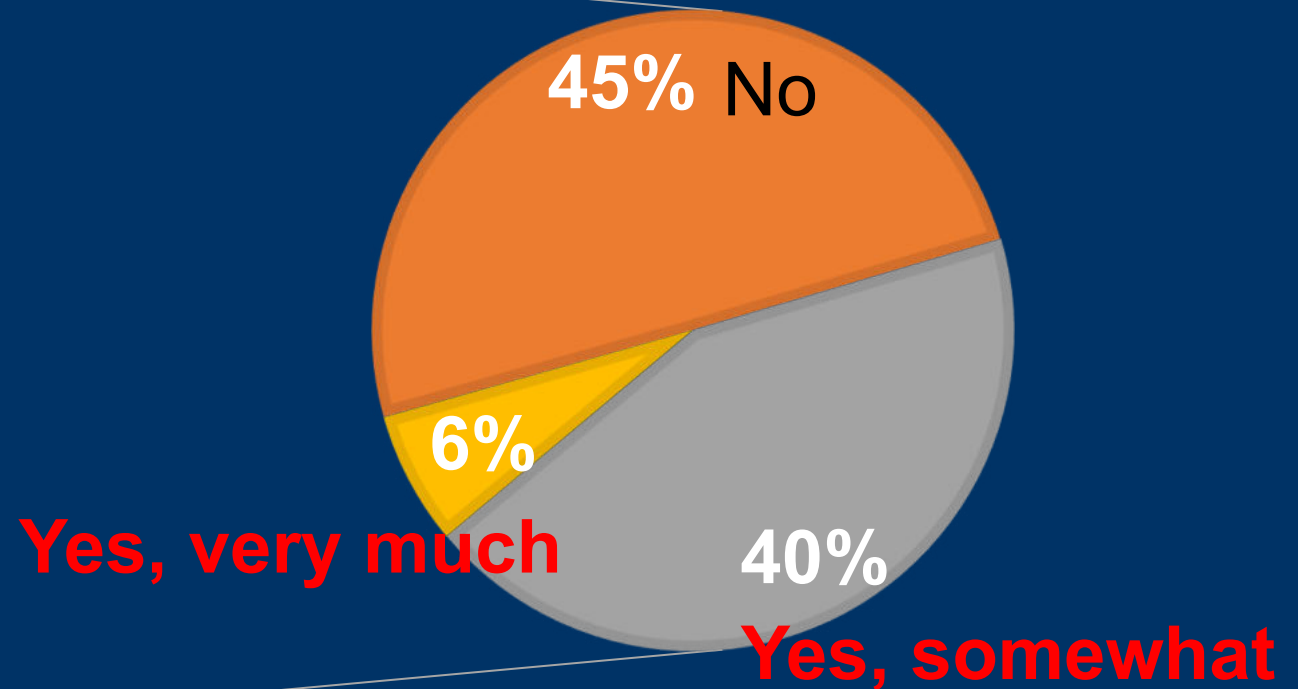
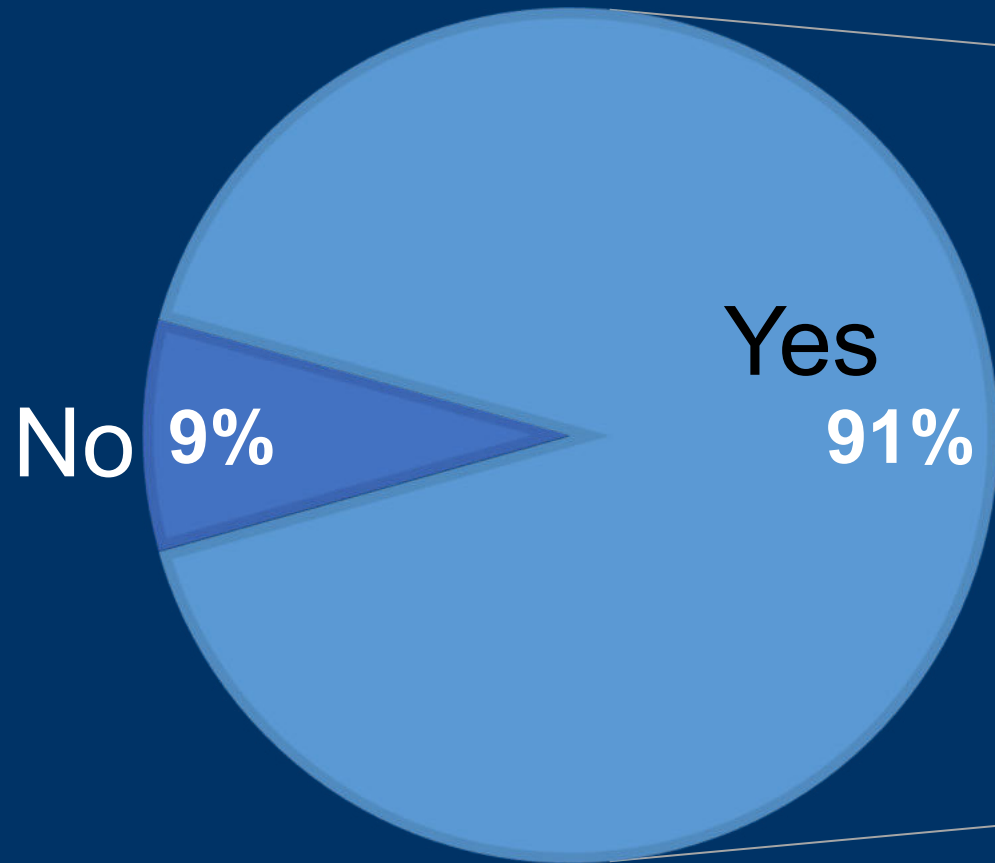
## Subspecialty



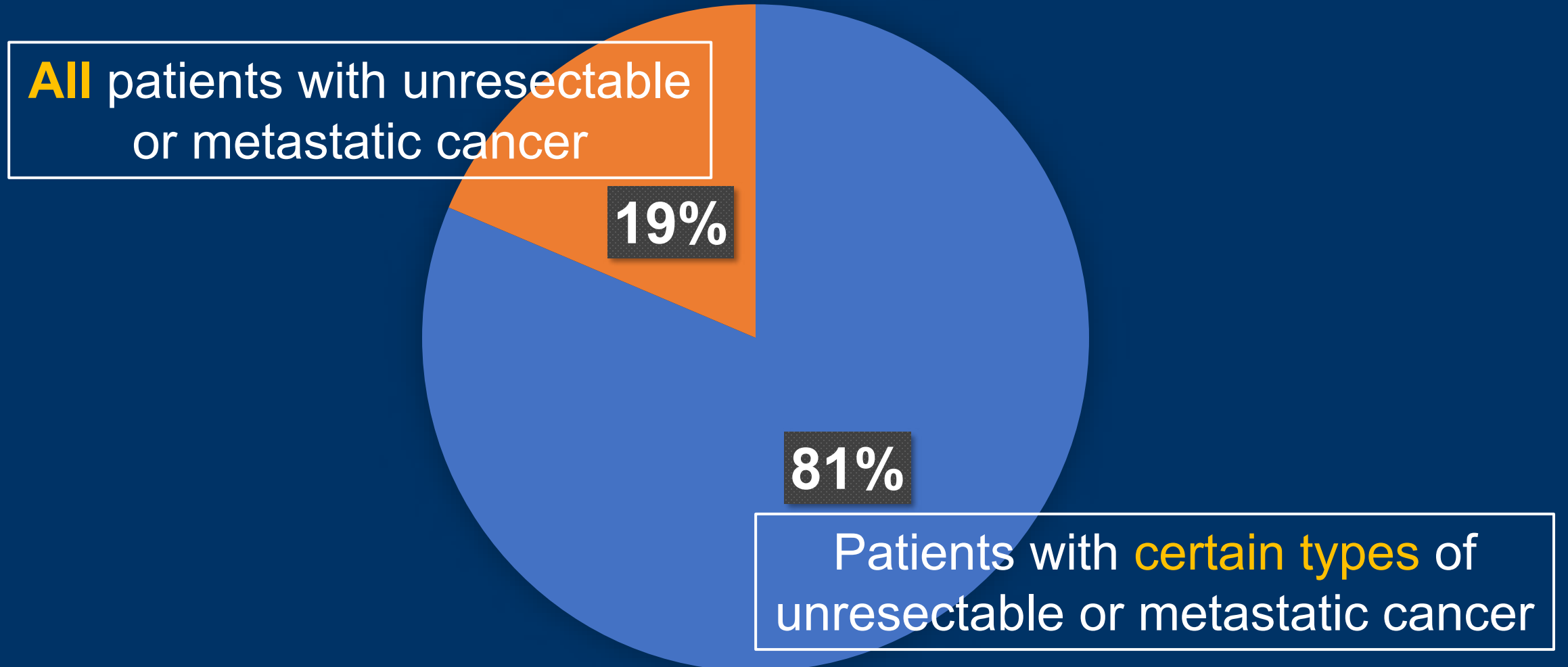
# Awareness

Q. Are you aware that pembrolizumab has been approved for patients with locally progressive and metastatic microsatellite instability-high (MSI-H) cancers in Japan?

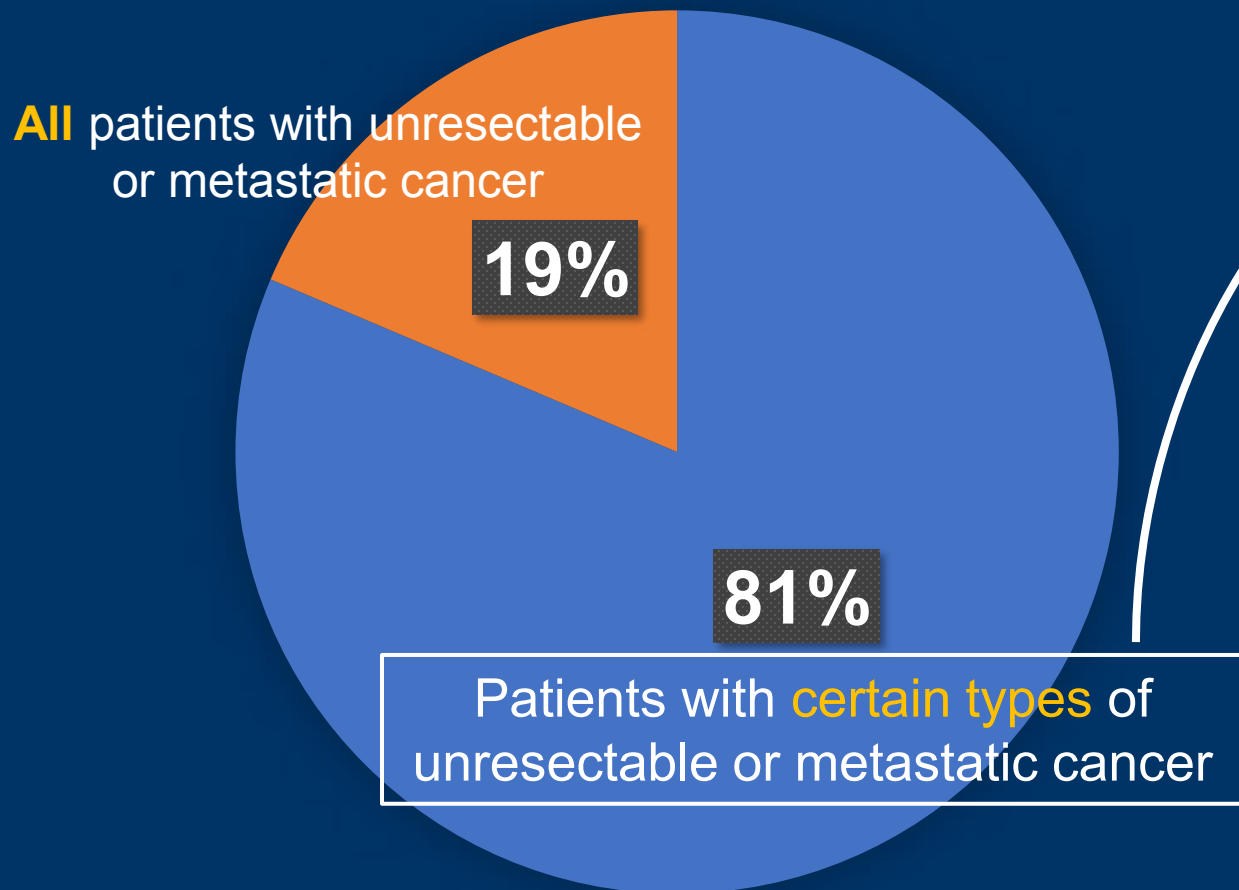
Q. Does this indication affect your clinical practice?



# Q1. Who should be tested?



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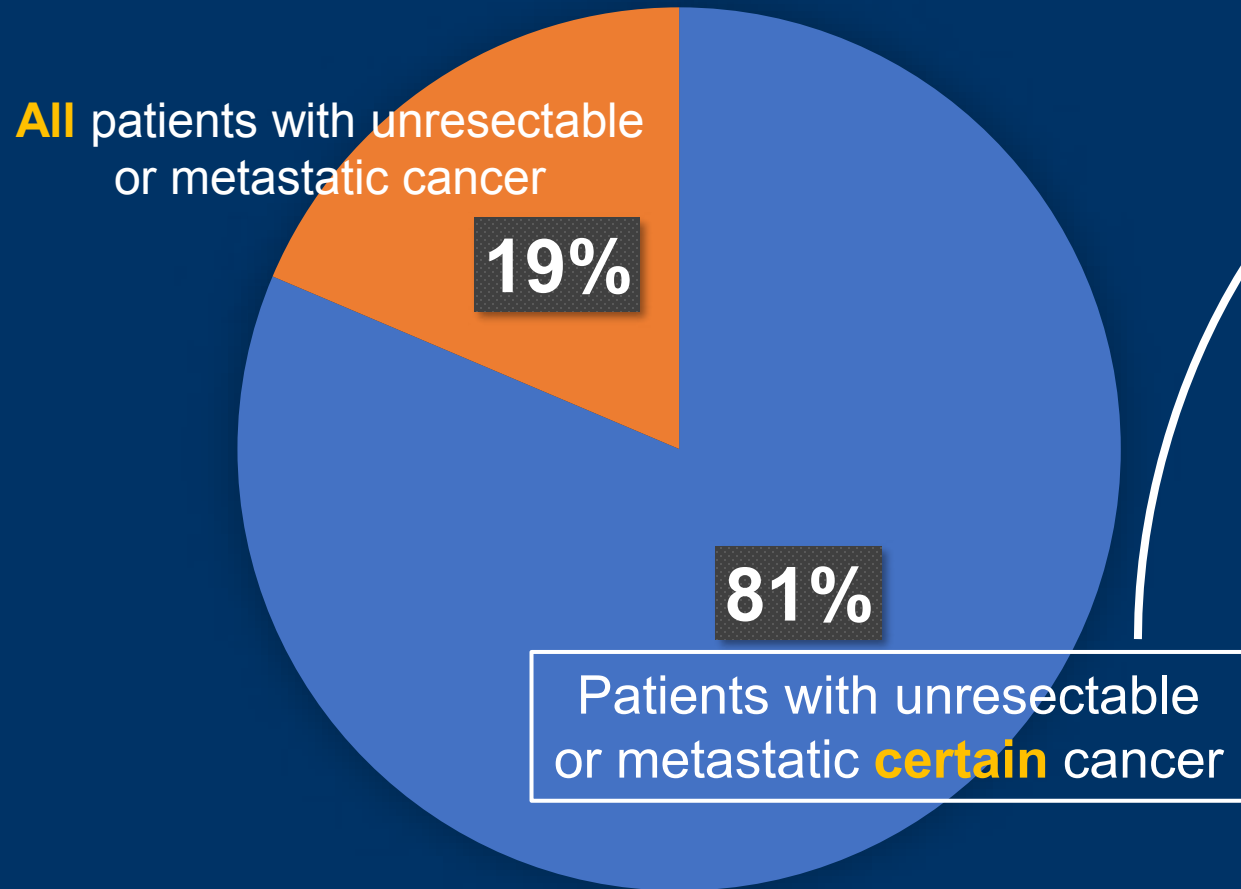
Q. Which indicators are important for you to accept MSI / MMR tests?

\*Multiple answers allowed

| Answers   | No  | %      |
|---|-----|--------|
| Organ-specific cancer for which immune checkpoint inhibitors are not approved | 627 | 63.7%  |
| Cases with clinicopathological features which MSI-H/dMMR is suspected         | 465 | 47.3%  |
| Cases with a family history suspicious of Lynch syndrome                      | 450 | 45.7%  |
| Prevalence  | 206 | 20.9%  |
| Total   | 984 | 100.0% |



# Q1. Who should be tested?

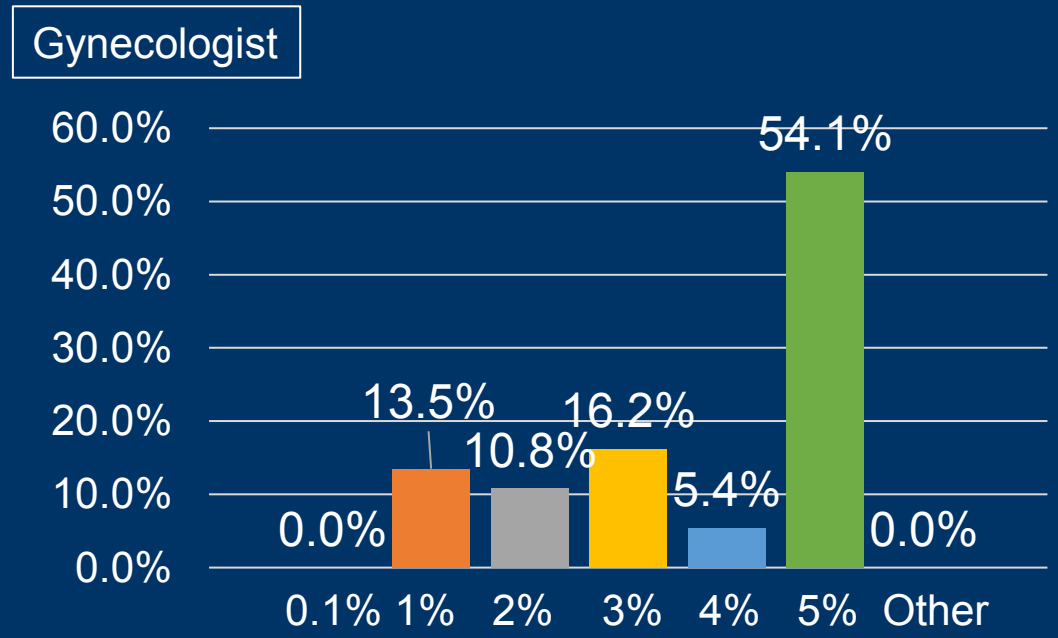
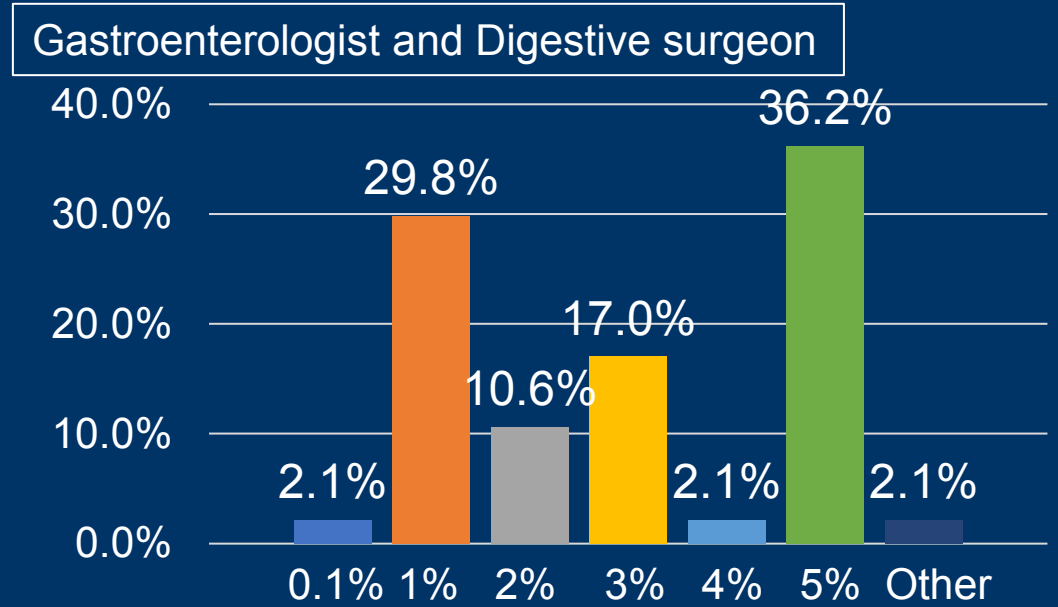
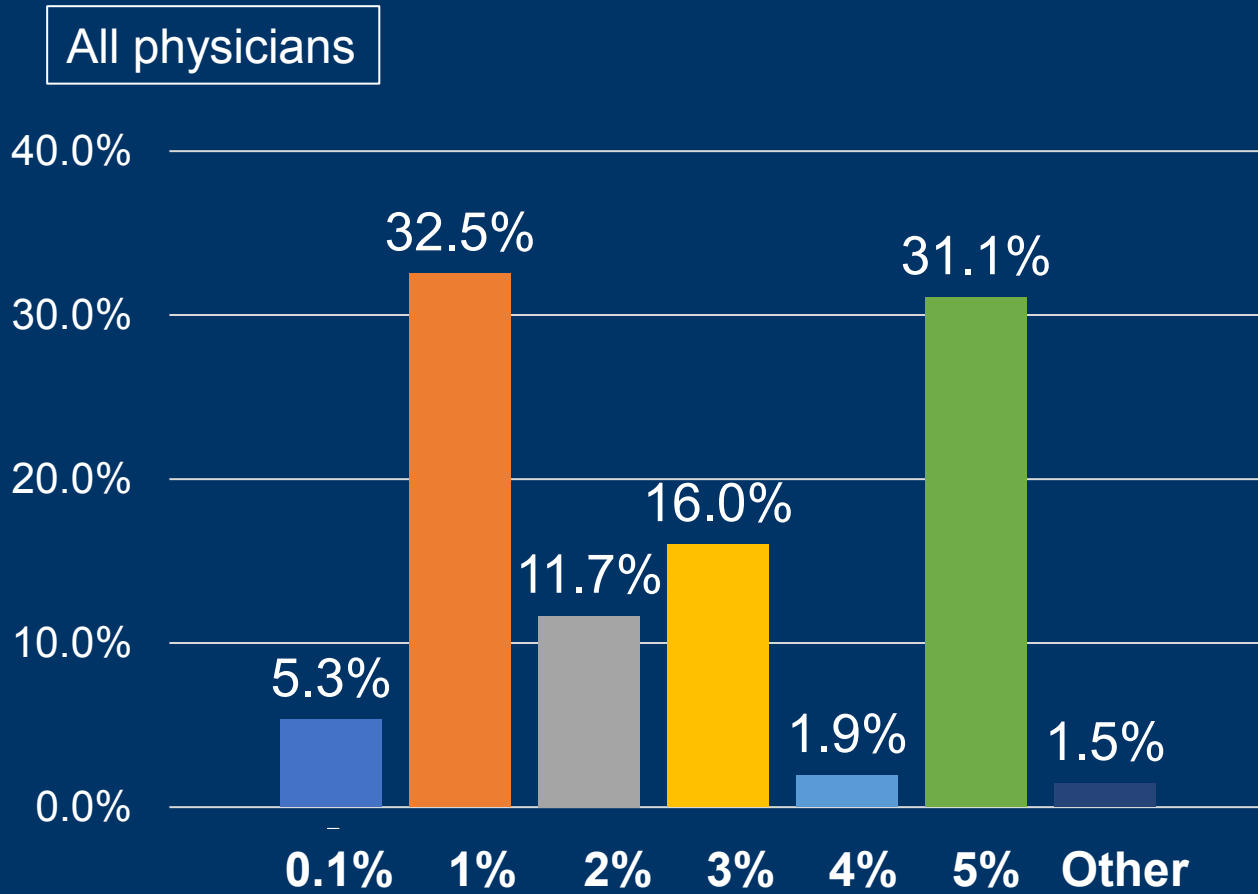


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\*Multiple answers allowed

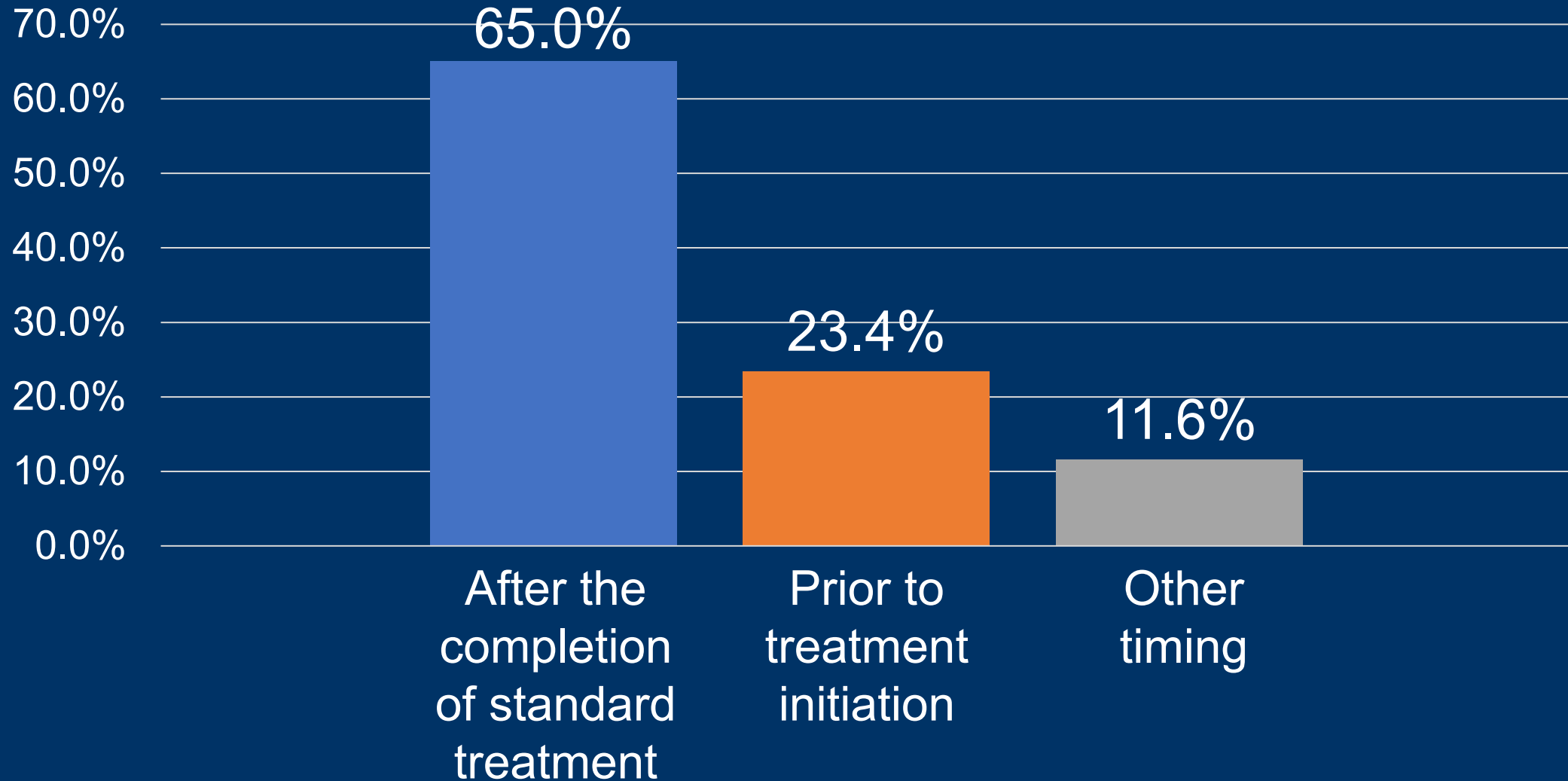
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# Q1-1. What is the threshold prevalence of MSI-H/dMMR for which you consider recommending the MSI / MMR tests?



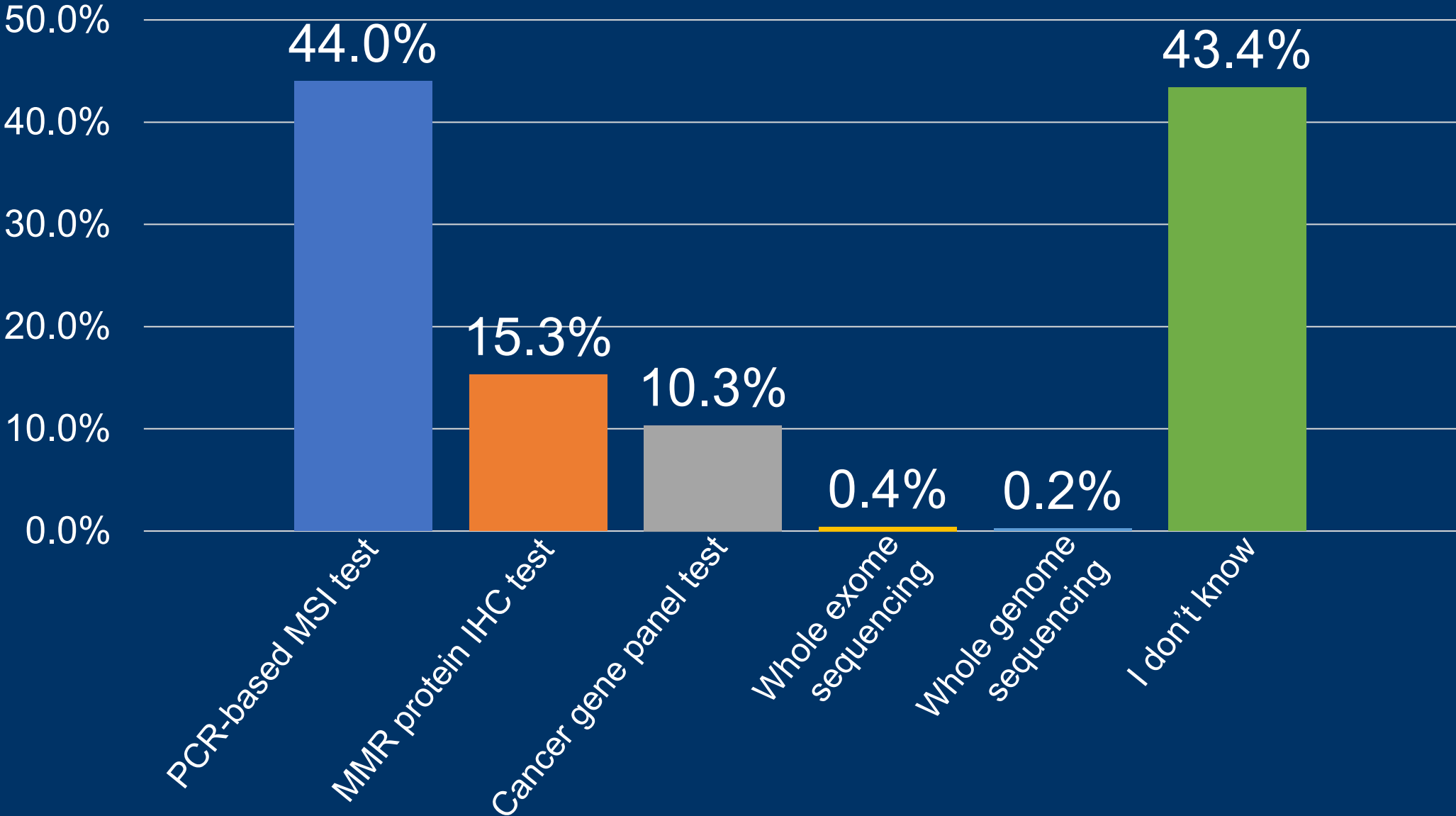
## Q2. At which time point do you consider testing for MSI / MMR?

\*Multiple answers allowed



# Q3. Which test do you order to evaluate MSI-H / dMMR in tumor?

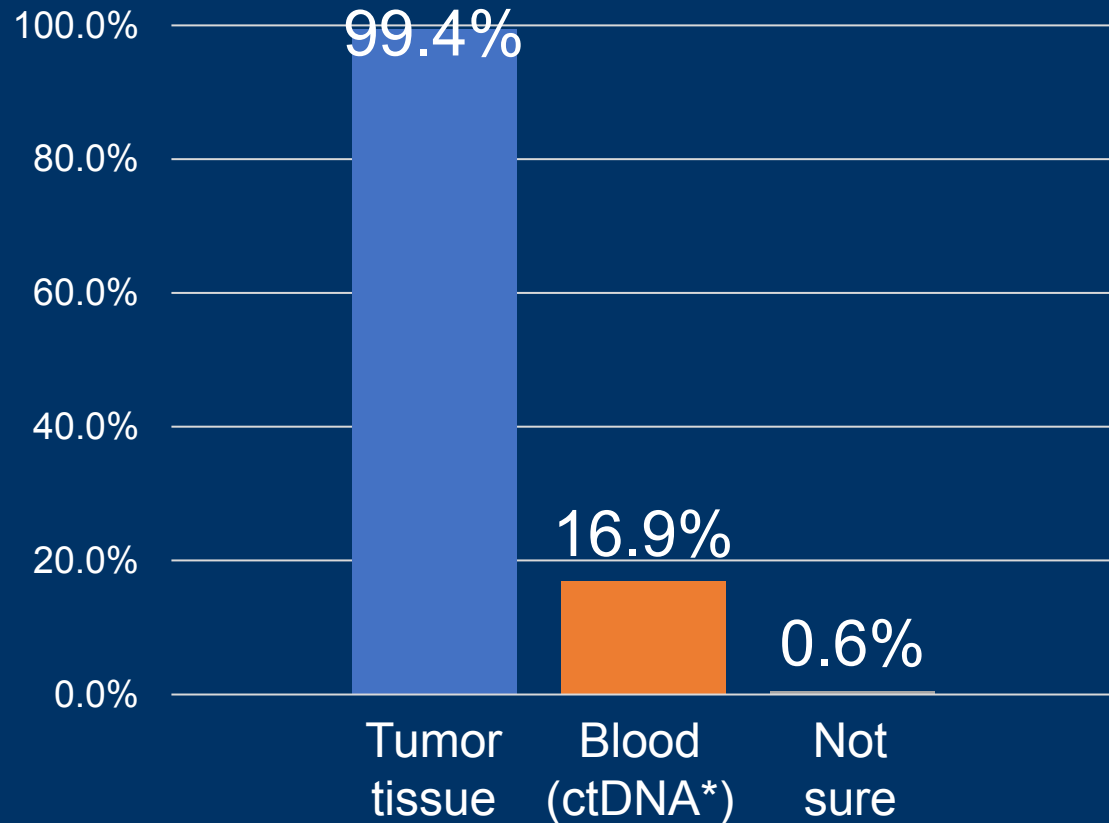
\*Multiple answers allowed



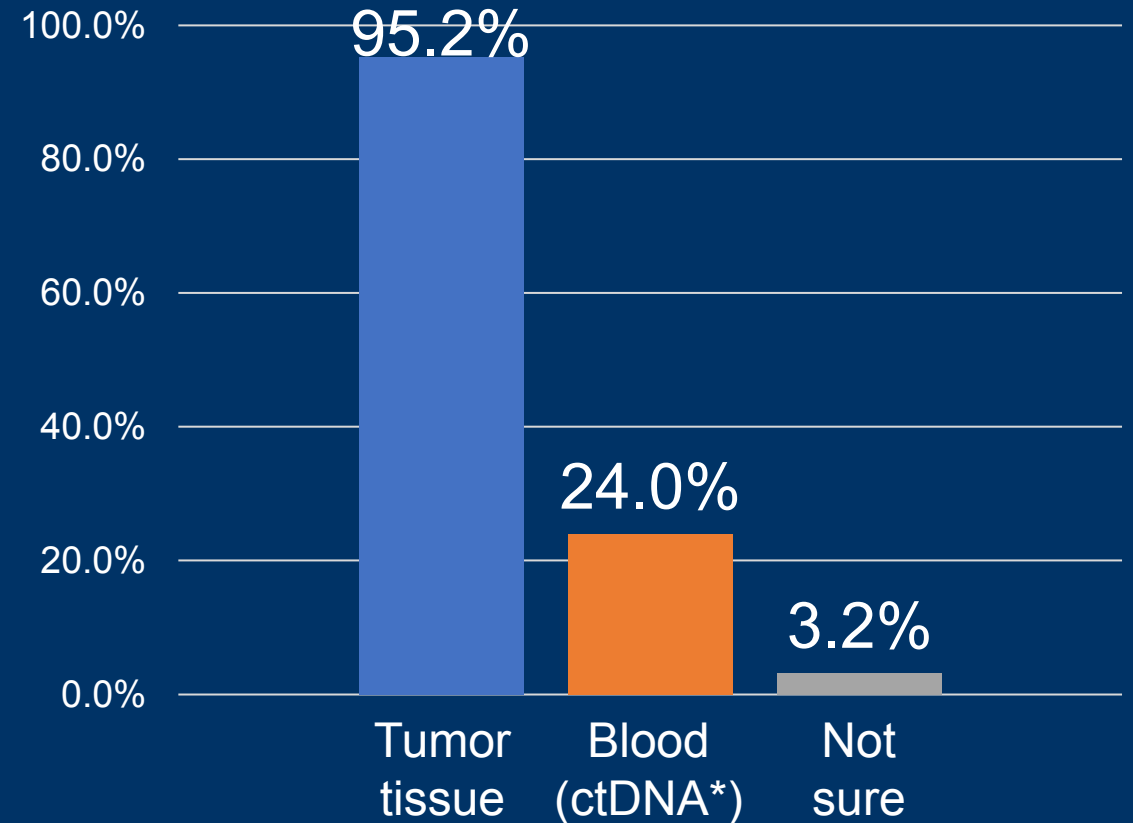
# Q4. Which sample do you use for MSI / MMR tests (PCR / Cancer gene panel test )

\*Multiple answers allowed

PCR

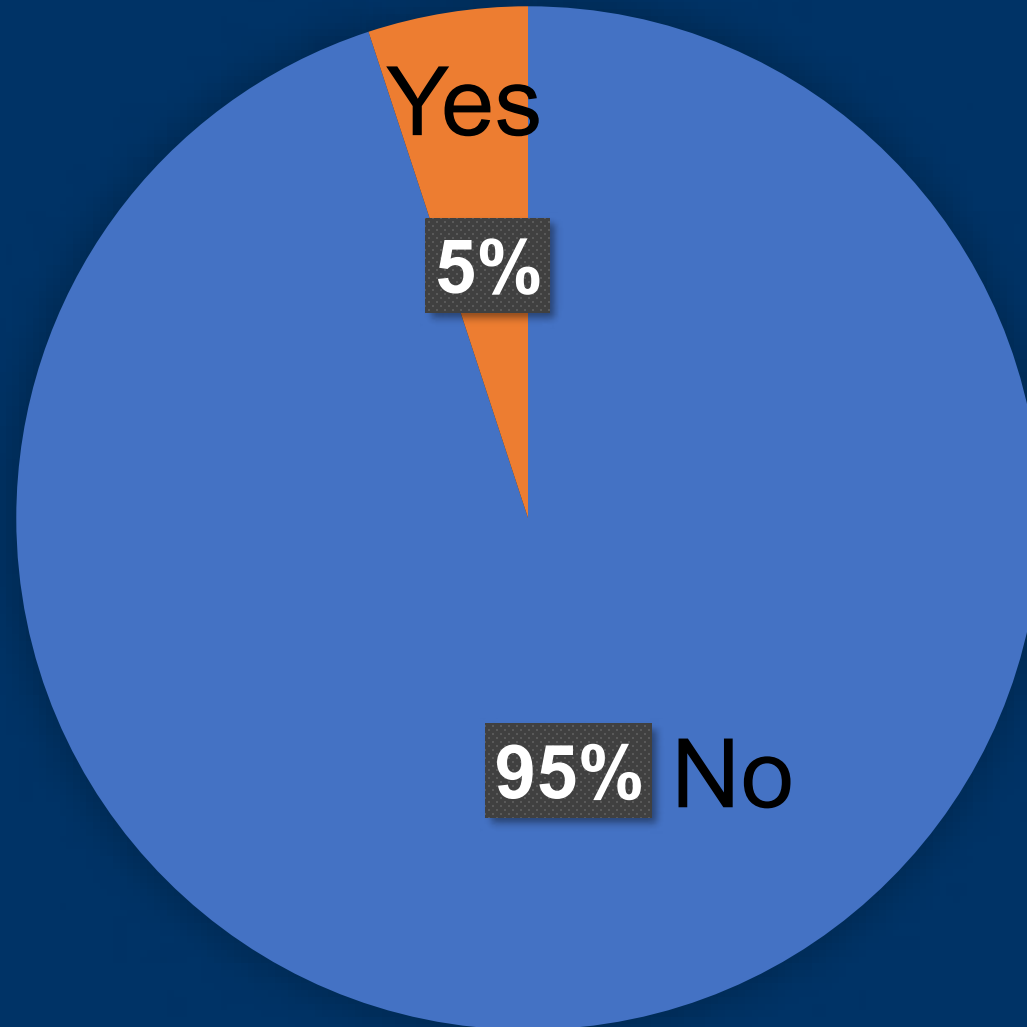


Cancer gene panel test

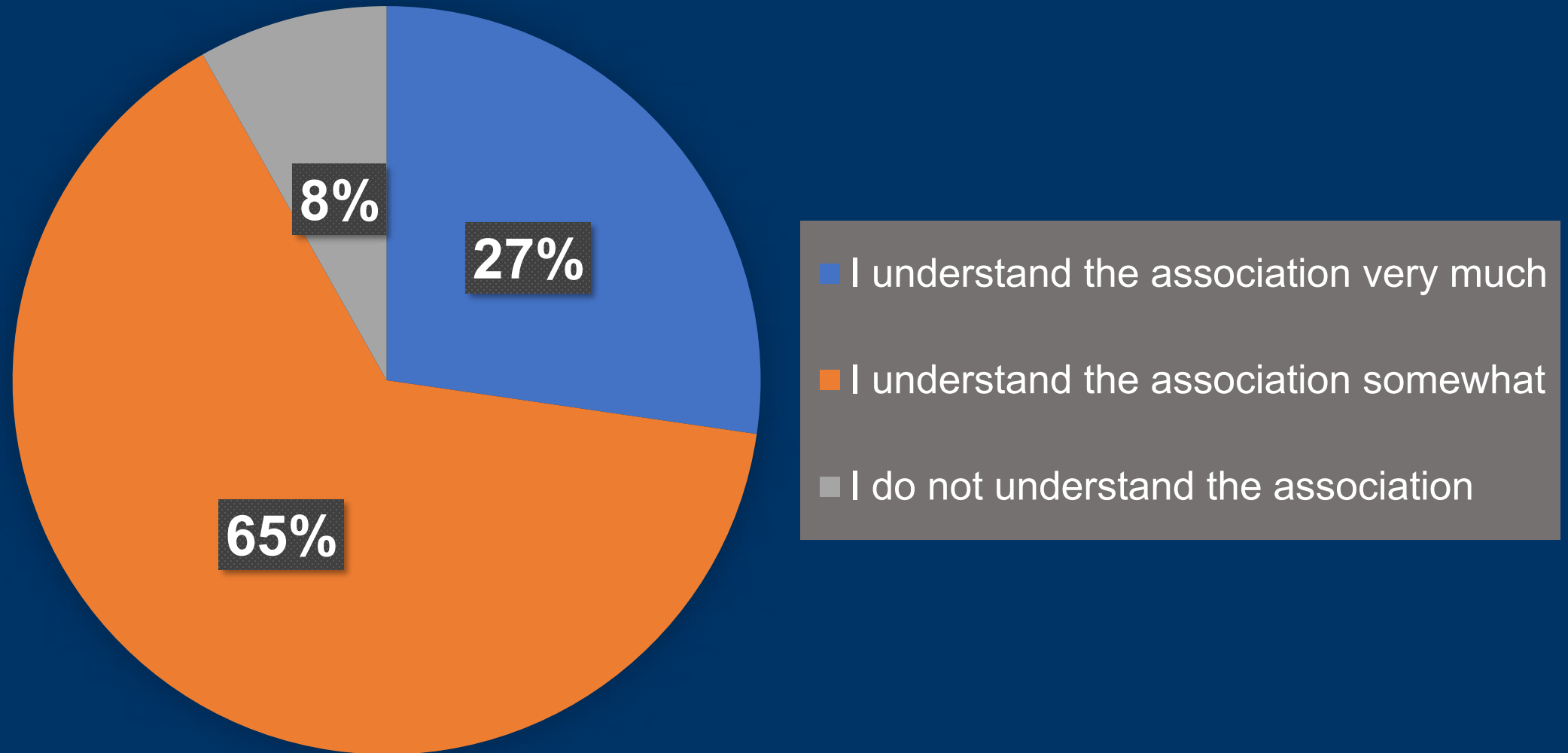


\*Circulating tumor DNA

**Q5. Have you ever administered immunotherapy to patients based on the results of MSI / MMR tests?**

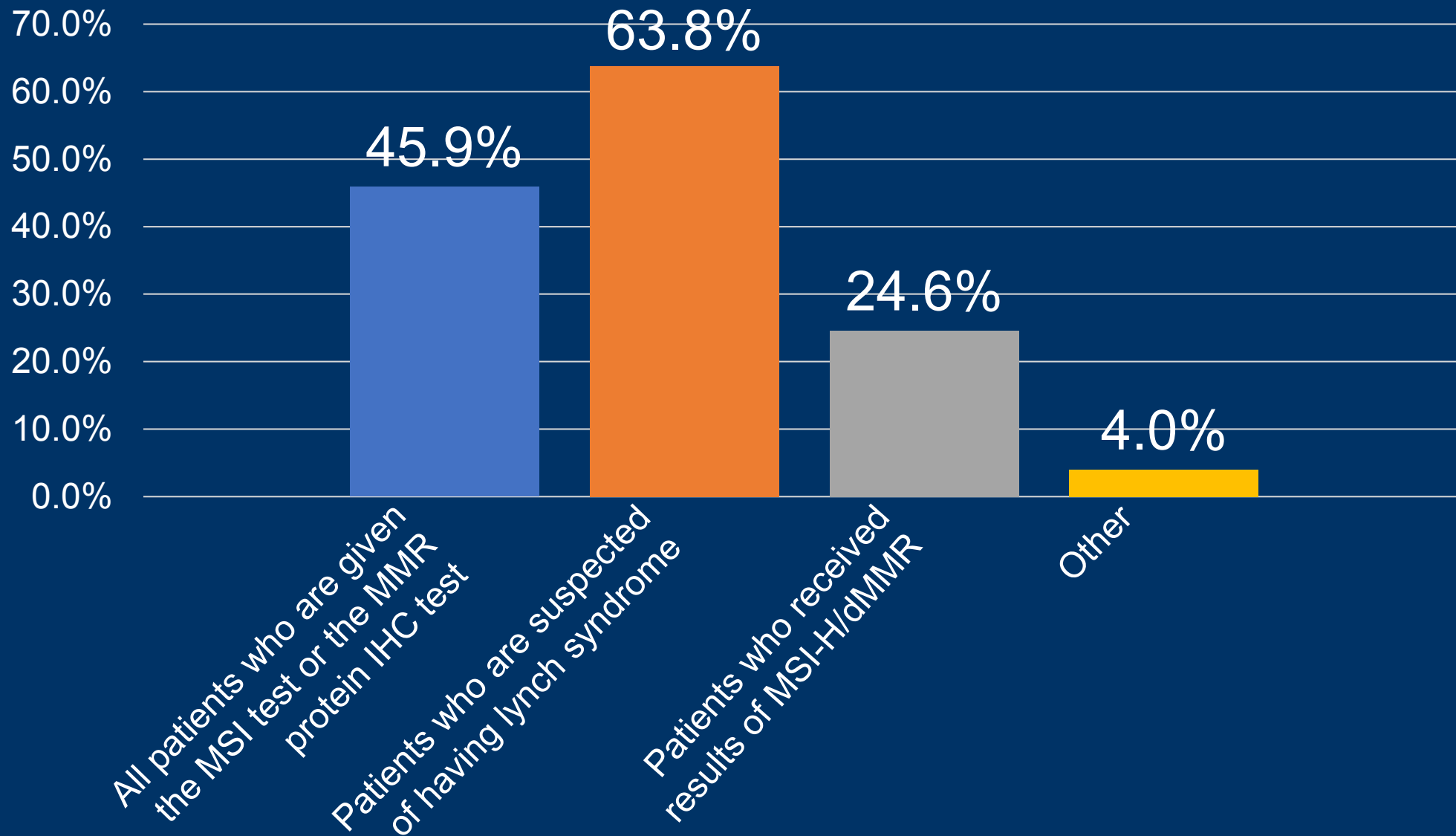


## Q6. How aware are you of the association between Lynch syndrome and MMR deficiency?



# Q7. Which patients do you discuss the consideration of Lynch syndrome?

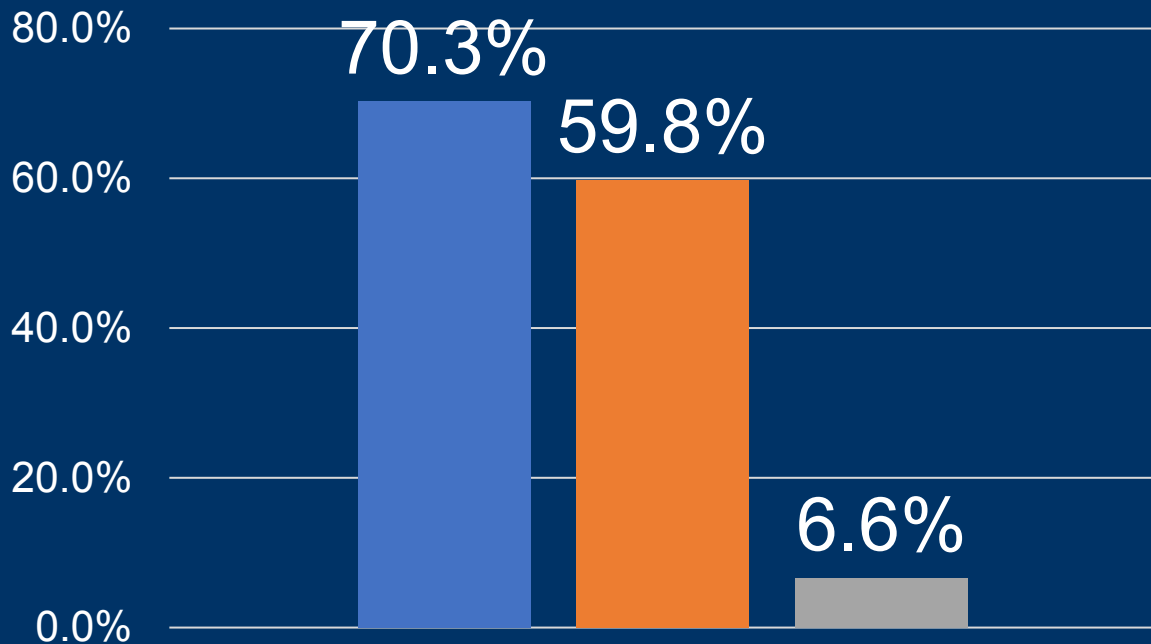
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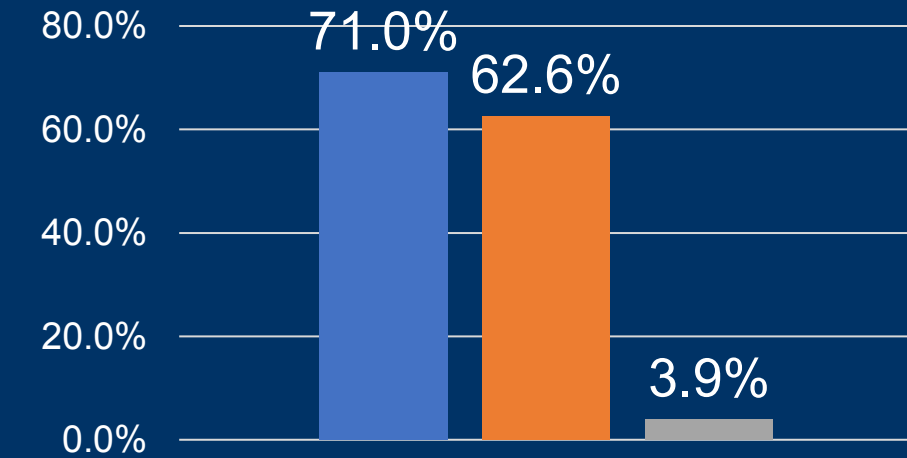
# Q7-1. How do you suspect patients harbor Lynch syndrome?

All physicians

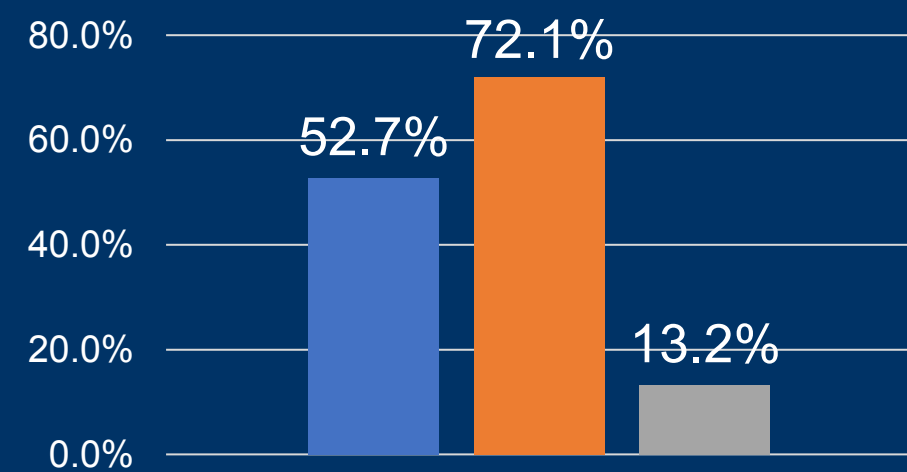


- Those who meet the Bethesda standard
- Those who meet the Amsterdam standard
- Other

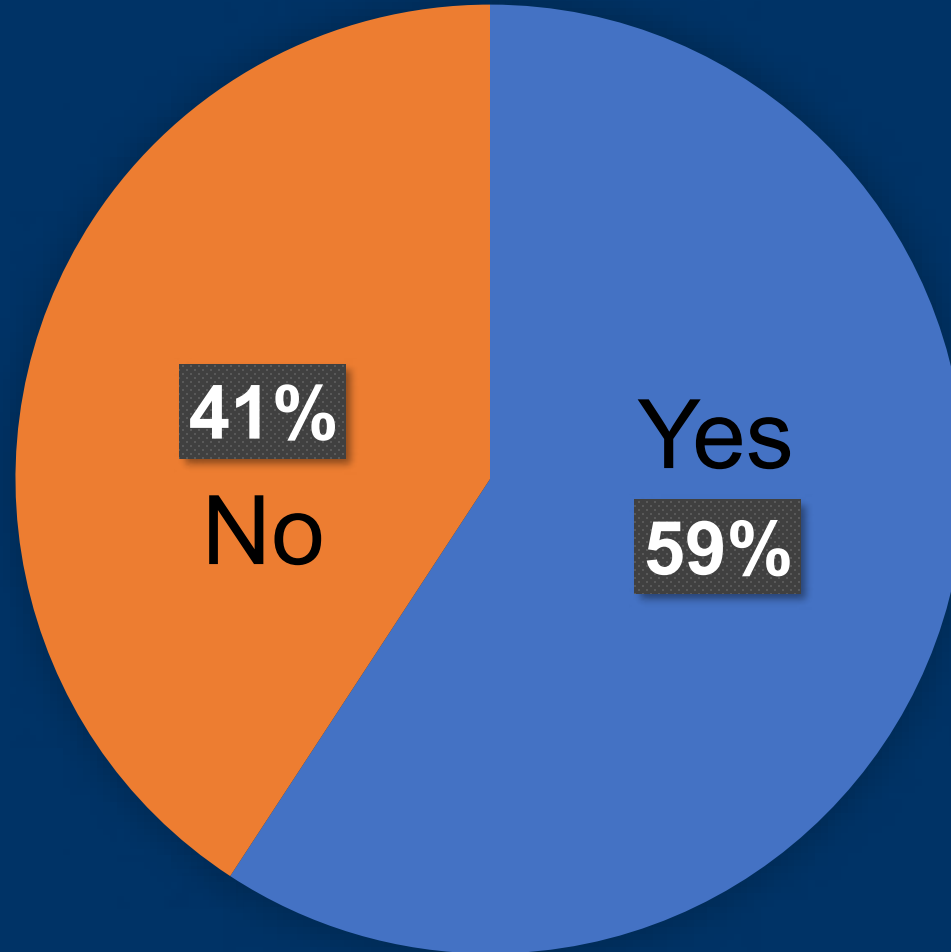
Gastroenterologist and Digestive surgeon



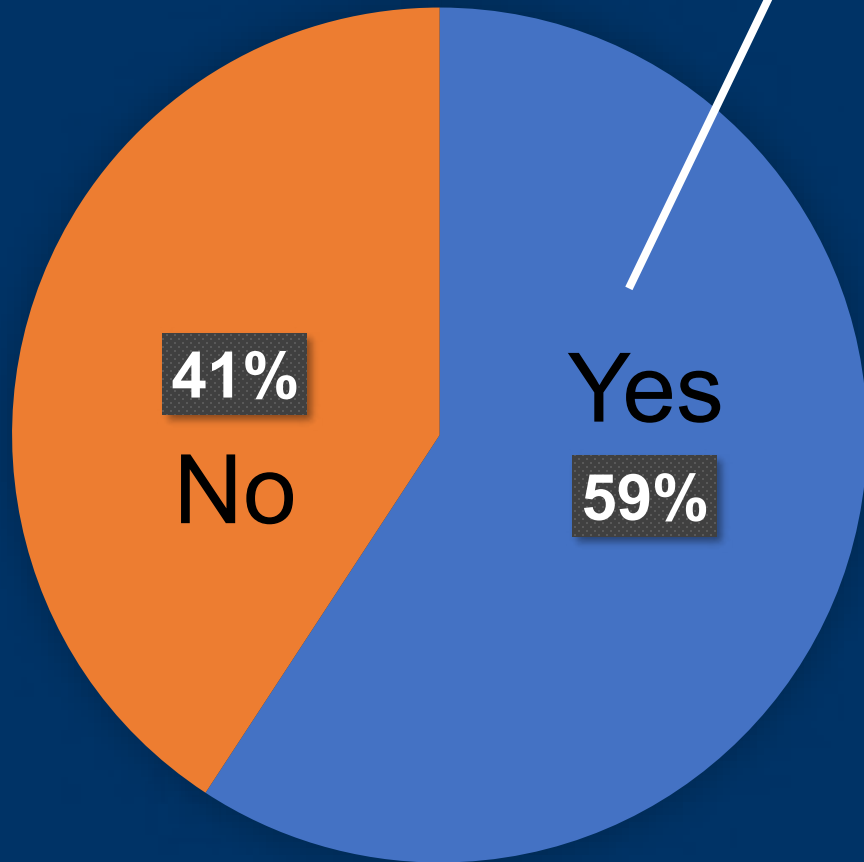
Gynecologist



# Q8. Have you ever referred patients to genetic diagnostic & counseling system?

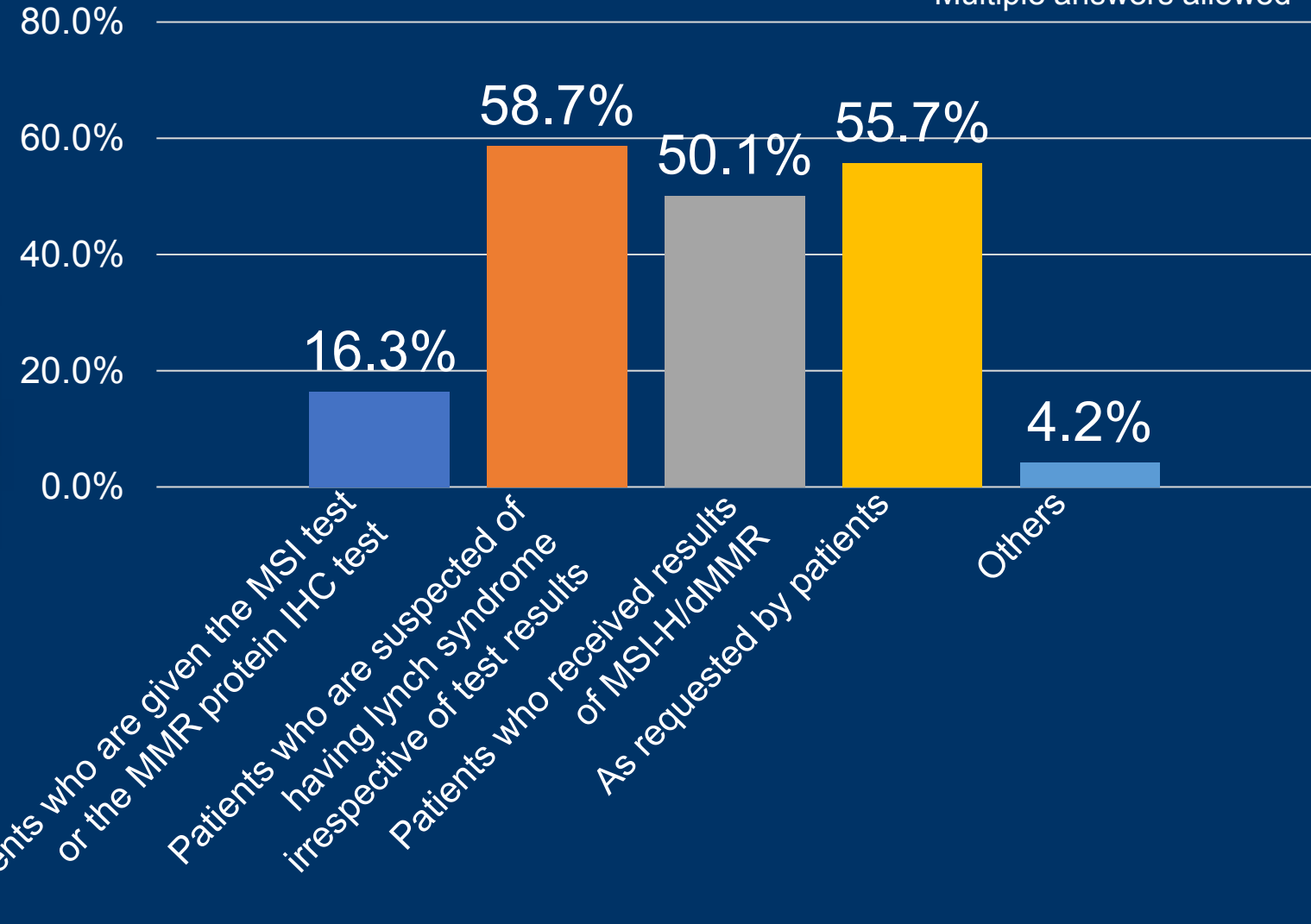


# Q8. Have you ever referred patients to genetic diagnostic & counseling system?

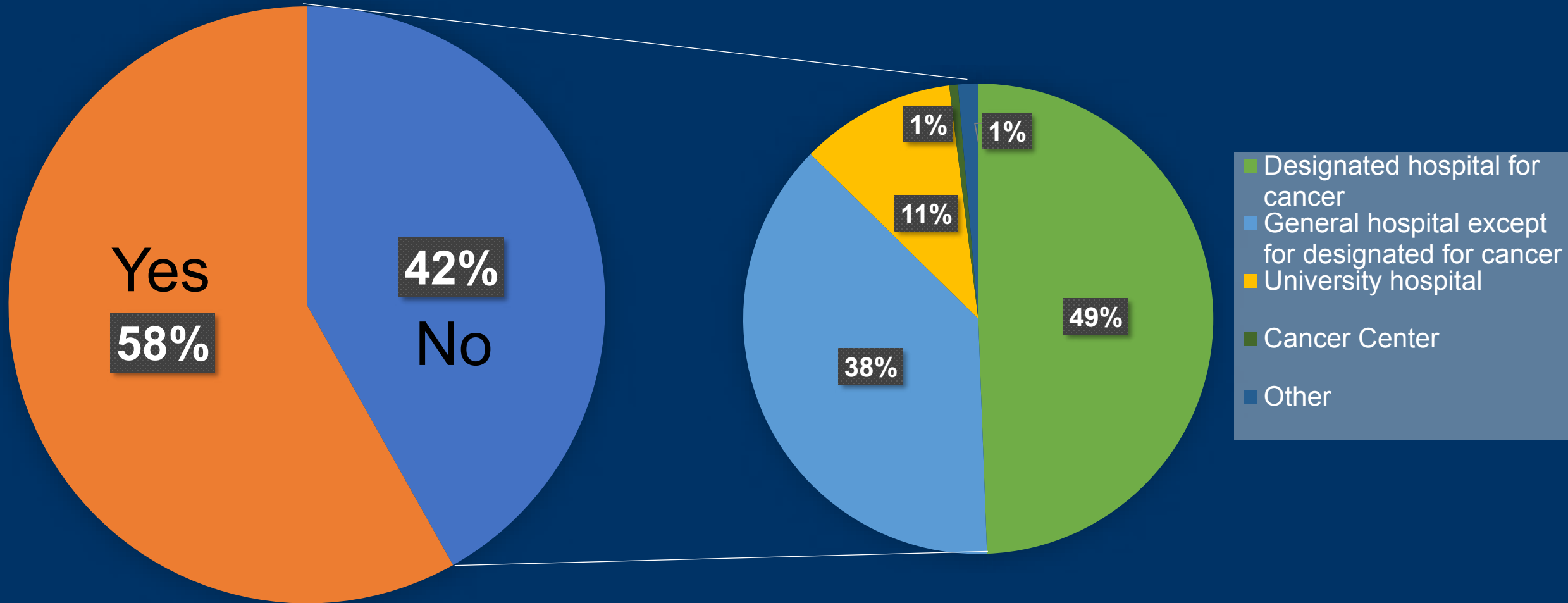


## Q8-1. Which patients do you introduce to those system?

\*Multiple answers allowed



# Q9. Does the organization you work for have a genetic diagnostic & counseling system?



# Summary

- 1,325 physicians participated in this questionnaire.
- Almost all physicians were aware of pembrolizumab being reimbursed for dMMR advanced/recurrent solid tumors. This tumor-agnostic indication affected their clinical practice.
- The majority of physicians conduct a routine MSI / MMR tests for not all but certain patients with advanced/recurrent solid tumors, particularly for
  - Specific cancer subtypes with a relatively high prevalence of dMMR and/or where an immune checkpoint inhibitor is not approved.
  - Clinicopathological features that dMMR is suspected, and with a family history suspicious of Lynch syndrome.
- About 40% of physicians conduct a routine dMMR test without a genetic diagnostic & counseling system.

# Conclusion

- This questionnaire to Japanese physicians reveals various ways of thinking for a routine dMMR test and indicates the necessity to establish genetic diagnostic & counseling system.
- Since the JSCO-hosted, JSMO-cooperated, provisional clinical opinion for the diagnosis and use of immunotherapy in pts with dMMR tumors has been published in March 2019, a follow-up survey to investigate chronological advance will be planned in 2020.



# Acknowledgments



All physicians who cooperate to this survey

JSCO and JSMO to support this survey

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