# CNMSC BIOMARKER SURVEY RESULTS 2025

Collaborative Partnership Novartis & CNMSC

# AGENDA

- Review survey results

- Group discussion of results

- Group discussion next steps

# TIMELINE CNMSC SURVEY

- CNMSC Executive met
- Nov 26 – Proofed/discussed the survey before it was sent out
- Feb 11 – Reviewed results and key messages that came out of survey

- Survey first sent out – Dec 6th
- Reminders sent: Dec 16, January 6 and 22nd
- Deadline: January 23rd survey closed

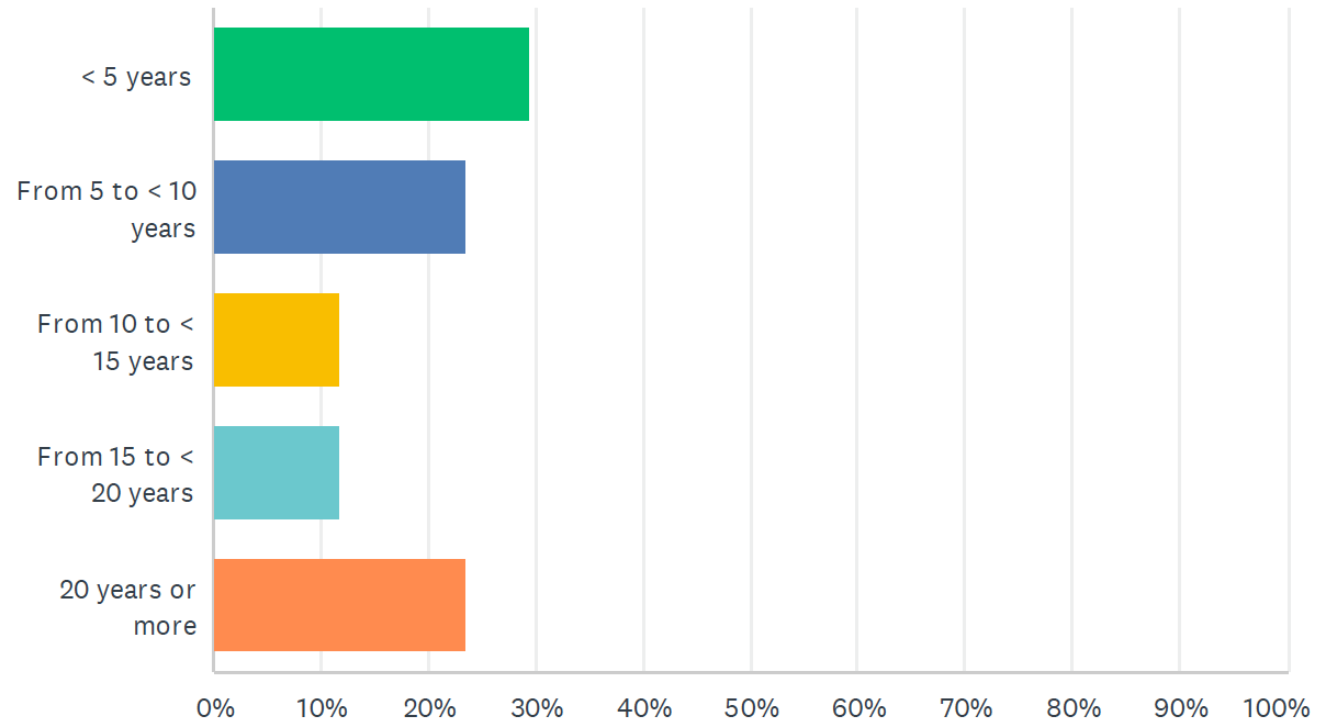- Sent out to 170 CNMSC MS neurologists/nurse practitioners across Canada. 17 responses received.

1. PLEASE INDICATE WHICH PROVINCE YOU CURRENTLY PRACTICE IN?
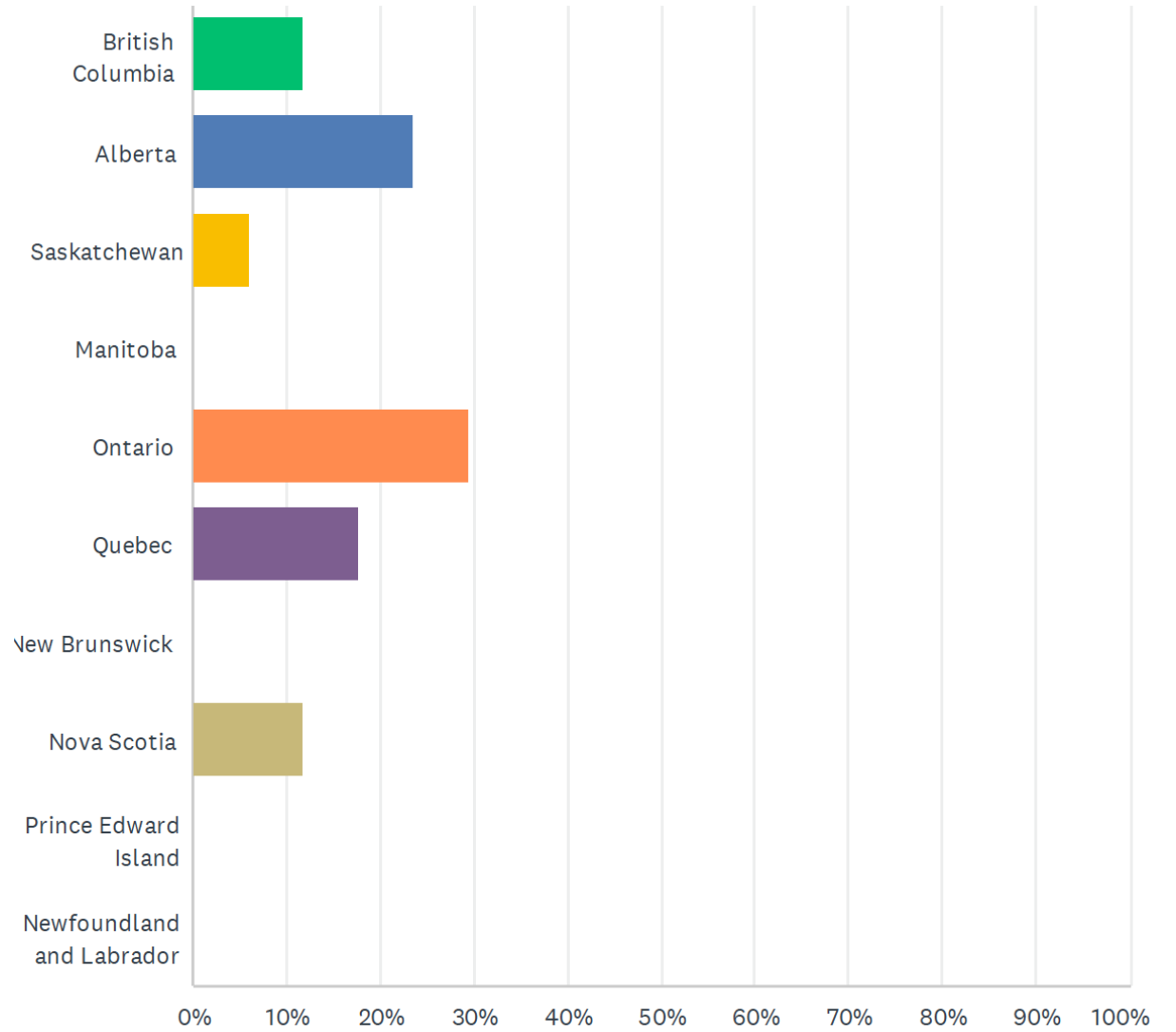
# 3. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PRIMARY SPECIALTY?

Answered: 17    Skipped: 0
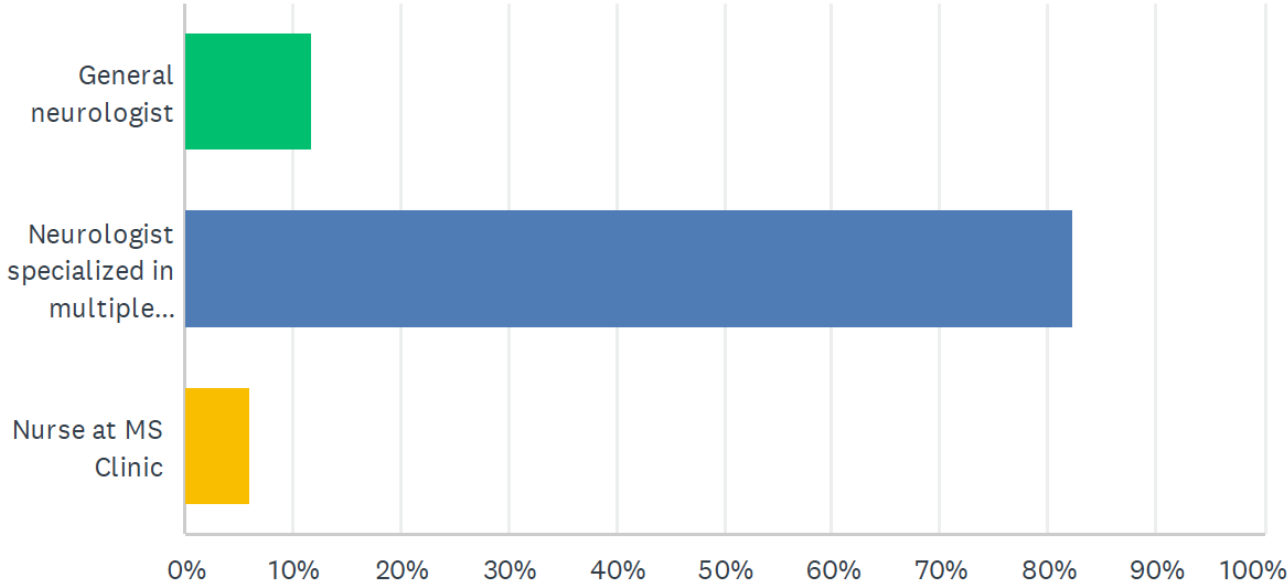
# 4. IN TOTAL, HOW MANY PATIENTS WITH MS DO YOU HAVE IN YOUR PRACTICE?

| # | RESPONSES | DATE |
|---|-----------|------|
| 1 | 1200 | 1/23/2025 10:51 AM |
| 2 | 400 | 1/22/2025 9:59 PM |
| 3 | 2000 | 1/22/2025 7:58 PM |
| 4 | 500 | 1/22/2025 7:13 PM |
| 5 | 2500 | 12/26/2024 4:54 PM |
| 6 | 1200 | 12/19/2024 3:26 PM |
| 7 | 400 | 12/18/2024 10:06 AM |
| 8 | 800 | 12/16/2024 7:23 PM |
| 9 | 250 | 12/12/2024 4:18 PM |
| 10 | 2000 | 12/12/2024 1:27 PM |
| 11 | 2000 | 12/12/2024 12:33 PM |
| 12 | 1500 | 12/11/2024 2:28 PM |
| 13 | 500 | 12/11/2024 2:27 PM |
| 14 | 120 | 12/10/2024 9:05 AM |
| 15 | 1000 | 12/9/2024 6:20 PM |
| 16 | 900 | 12/9/2024 5:57 PM |

- 16/17 responses

5. APPROXIMATELY HOW MANY PATIENTS WITH MS DO YOU SEE IN A TYPICAL WEEK OF YOUR PRACTICE?
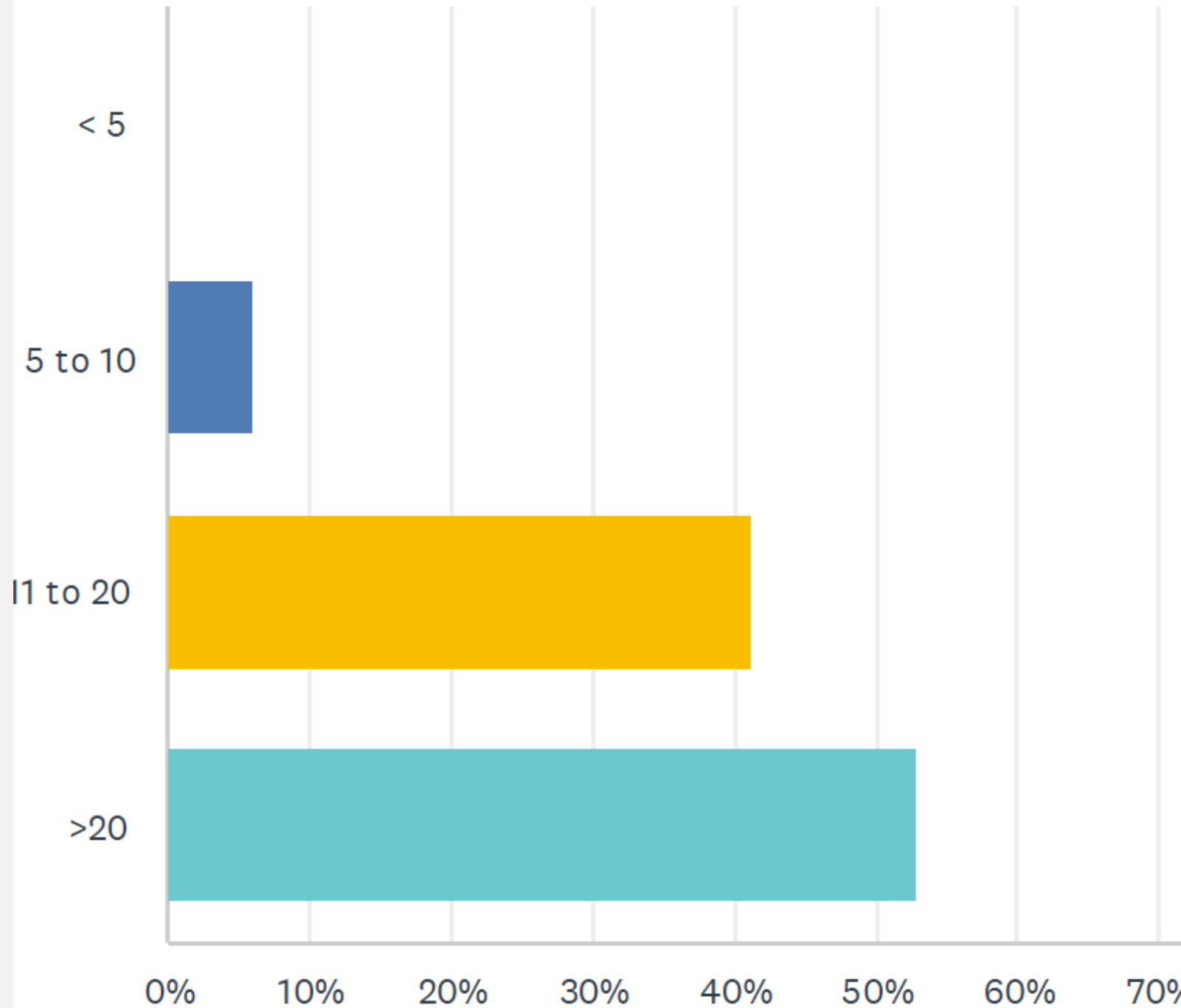
# 6. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PRACTICE
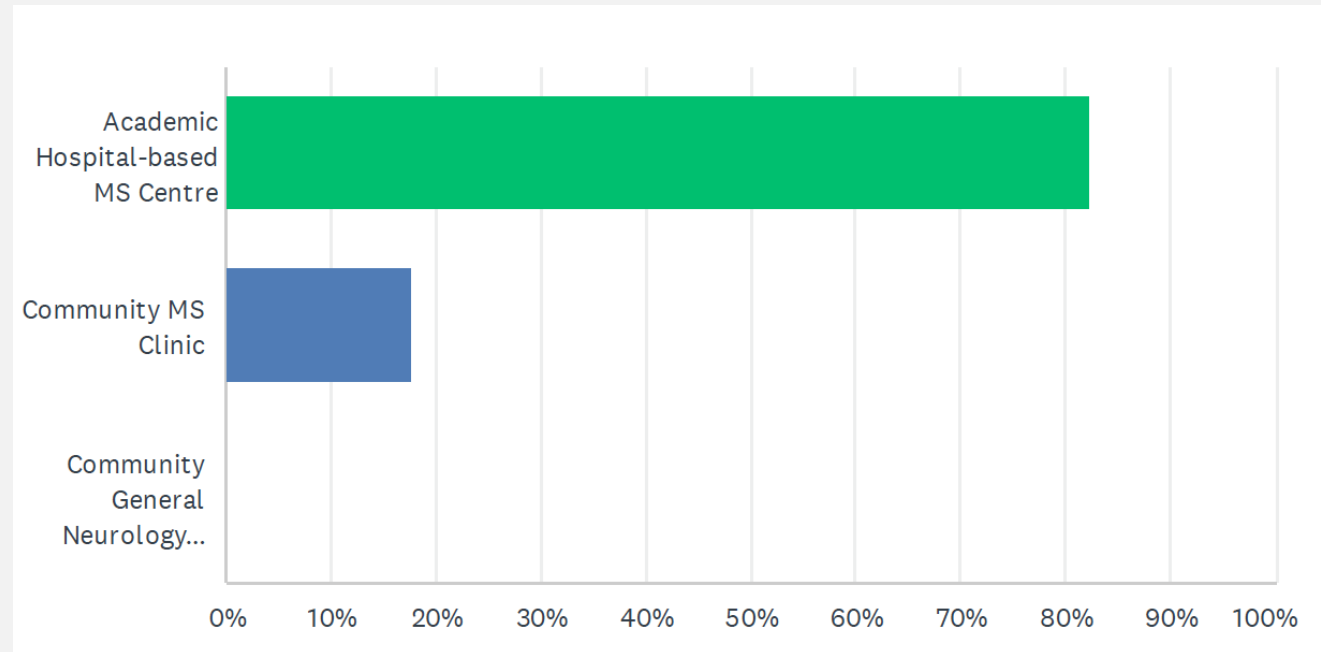
# 7. WHAT ASSESSMENTS/EVALUATIONS/TESTS ARE USUALLY DONE AS YOUR STANDARD OF CARE?

| | BASELINE VISIT/DIAGNOSIS | EVERY FOLLOW-UP VISIT | OCCASIONAL FOLLOW-UP VISIT | TOTAL RESPONDENTS |
|---|---|---|---|---|
| MRI - T1/Gadolinium | 100.00%<br>14 | 14.29%<br>2 | 50.00%<br>7 | 14 |
| MRI - T2 | 88.24%<br>15 | 35.29%<br>6 | 64.71%<br>11 | 17 |
| MRI - Central Vein Sign (CVS) | 75.00%<br>3 | 0.00%<br>0 | 25.00%<br>1 | 4 |
| MRI - Paramagnetic Rim Lesions (PRL) | 100.00%<br>2 | 0.00%<br>0 | 0.00%<br>0 | 2 |
| Kappa Free Ligh Chain (kFLC) | 100.00%<br>1 | 0.00%<br>0 | 0.00%<br>0 | 1 |
| Oligoclonal Bands in CSF | 100.00%<br>17 | 0.00%<br>0 | 5.88%<br>1 | 17 |
| Serum Neurofilament Light-chain (sNfL) | 57.14%<br>4 | 0.00%<br>0 | 85.71%<br>6 | 7 |
| Optical coherence tomography (OCT) | 80.00%<br>4 | 0.00%<br>0 | 40.00%<br>2 | 5 |
| Neurological exam | 100.00%<br>17 | 88.24%<br>15 | 5.88%<br>1 | 17 |
| EDSS | 100.00%<br>17 | 100.00%<br>17 | 5.88%<br>1 | 17 |
| Nine-Hole peg test (9-HPT) | 66.67%<br>2 | 33.33%<br>1 | 66.67%<br>2 | 3 |
| T25FW | 38.46%<br>5 | 38.46%<br>5 | 69.23%<br>9 | 13 |
| 6 min walk test | 0.00%<br>0 | 0.00%<br>0 | 100.00%<br>2 | 2 |
| Timed Up and Go Test | 0.00%<br>0 | 0.00%<br>0 | 0.00%<br>0 | 0 |
| MSFC | 66.67%<br>2 | 33.33%<br>1 | 33.33%<br>1 | 3 |
| MS Walking Scale | 0.00%<br>0 | 0.00%<br>0 | 0.00%<br>0 | 0 |
| SDMT | 33.33%<br>4 | 16.67%<br>2 | 83.33%<br>10 | 12 |
| BICAMS | 0.00%<br>0 | 0.00%<br>0 | 0.00%<br>0 | 0 |
| PASAT/MACFIMS | 0.00%<br>0 | 0.00%<br>0 | 0.00%<br>0 | 0 |
| Fatigue Scale (eg. MFIS) | 0.00%<br>0 | 0.00%<br>0 | 100.00%<br>2 | 2 |
| Depression Scale (eg. BDI, MSDRS, PHQ-9, HADS) | 0.00%<br>0 | 0.00%<br>0 | 100.00%<br>6 | 6 |
| Patient Reported Outcomes | 20.00%<br>1 | 20.00%<br>1 | 80.00%<br>4 | 5 |

## 8. PLEASE INDICATE TO WHAT EXTENT YOU AGREE OR DISAGREE WITH EACH STATEMENT

| | STRONGLY DISAGREE | DISAGREE | NO OPINION | AGREE | STRONGLY AGREE | TOTAL | WEIGHTED AVERAGE |
|---|---|---|---|---|---|---|---|
| At least 90% of my patients are managed to my satisfaction. | 0.00%<br>0 | 17.65%<br>3 | 17.65%<br>3 | 47.06%<br>8 | 17.65%<br>3 | 17 | 3.65 |
| I am satisfied with the currently available tools to identify the patients that are at risk of experiencing events such as a relapse or a new/enlarging CNS lesion in the near future. | 5.88%<br>1 | 52.94%<br>9 | 5.88%<br>1 | 29.41%<br>5 | 5.88%<br>1 | 17 | 2.82 |
| I can tell which of my patients are progressing. | 5.88%<br>1 | 29.41%<br>5 | 17.65%<br>3 | 35.29%<br>6 | 11.76%<br>2 | 17 | 3.24 |
| I am satisfied with the currently available tools to identify patients that are or are at risk of progressing. | 11.76%<br>2 | 64.71%<br>11 | 5.88%<br>1 | 11.76%<br>2 | 5.88%<br>1 | 17 | 2.47 |
| I can tell which of my patients are at risk of progressing. | 0.00%<br>0 | 58.82%<br>10 | 17.65%<br>3 | 23.53%<br>4 | 0.00%<br>0 | 17 | 2.65 |
| I consider myself to be knowledgeable with respect to sNfL. | 0.00%<br>0 | 35.29%<br>6 | 11.76%<br>2 | 41.18%<br>7 | 11.76%<br>2 | 17 | 3.29 |
| I require additional guidance concerning the integration and optimal use of sNfL into my clinical practice. | 5.88%<br>1 | 11.76%<br>2 | 23.53%<br>4 | 35.29%<br>6 | 23.53%<br>4 | 17 | 3.65 |
| I am confident interpreting sNfL test results. | 5.88%<br>1 | 35.29%<br>6 | 11.76%<br>2 | 41.18%<br>7 | 5.88%<br>1 | 17 | 3.12 |
| I am confident using sNfL results as part of my clinical decision-making process. | 0.00%<br>0 | 52.94%<br>9 | 23.53%<br>4 | 17.65%<br>3 | 5.88%<br>1 | 17 | 2.76 |
| Integration of sNfL into clinical practice will have a significant and positive impact on MS management. | 5.88%<br>1 | 0.00%<br>0 | 41.18%<br>7 | 41.18%<br>7 | 11.76%<br>2 | 17 | 3.59 |
| sNfL could help me identify more rapidly patients that need a change in therapy. | 0.00%<br>0 | 5.88%<br>1 | 35.29%<br>6 | 41.18%<br>7 | 17.65%<br>3 | 17 | 3.71 |
| sNfL could help me assess therapeutic response. | 0.00%<br>0 | 0.00%<br>0 | 17.65%<br>3 | 58.82%<br>10 | 23.53%<br>4 | 17 | 4.06 |
| I believe sNfL testing will become the standard of care in the management of MS, such as MRI, in the next 2 to 5 years. | 5.88%<br>1 | 5.88%<br>1 | 11.76%<br>2 | 52.94%<br>9 | 23.53%<br>4 | 17 | 3.88 |

# 9. OUTSIDE OF LIMITED-TIME SPECIAL PROJECTS WITH PHARMACEUTICAL COMPANIES, DO YOU CURRENTLY HAVE ACCESS TO THE FOLLOWING BIOMARKERS FOR MS IN YOUR ROUTINE CLINICAL PRACTICE?

|  | YES | NO | I DON'T KNOW | TOTAL |
|---|---|---|---|---|
| Kappa Free light chain (kFLC) | 5.88%<br>1 | 76.47%<br>13 | 17.65%<br>3 | 17 |
| Serum neurofilament light chain (sNfL) | 17.65%<br>3 | 64.71%<br>11 | 17.65%<br>3 | 17 |
| Glial-fibrillary acidic protein (GFAP) | 11.76%<br>2 | 70.59%<br>12 | 17.65%<br>3 | 17 |
| Eye-movement markers (ETNATM-MS from Innodem technology) | 0.00%<br>0 | 82.35%<br>14 | 17.65%<br>3 | 17 |

# 10. I HAVE EXPERIENCE USING THESE BIOMARKERS IN MY ROUTINE CLINICAL PRACTICE

|  | YES | NO | TOTAL | WEIGHTED AVERAGE |
|---|---|---|---|---|
| kFLC | 5.88%<br>1 | 94.12%<br>16 | 17 | 1.94 |
| sNfL | 41.18%<br>7 | 58.82%<br>10 | 17 | 1.59 |
| GFAP | 5.88%<br>1 | 94.12%<br>16 | 17 | 1.94 |
| Eye-movement metrics (ETNATM-MS from Innodem technology | 0.00%<br>0 | 100.00%<br>17 | 17 | 2.00 |

11. IF YOU REQUIRE ADDITIONAL GUIDANCE/EDUCATION ON THE USE OF BIOMARKERS, HOW WOULD YOU LIKE TO ACCESS THIS INFORMATION (CHECK ALL THAT APPLY)
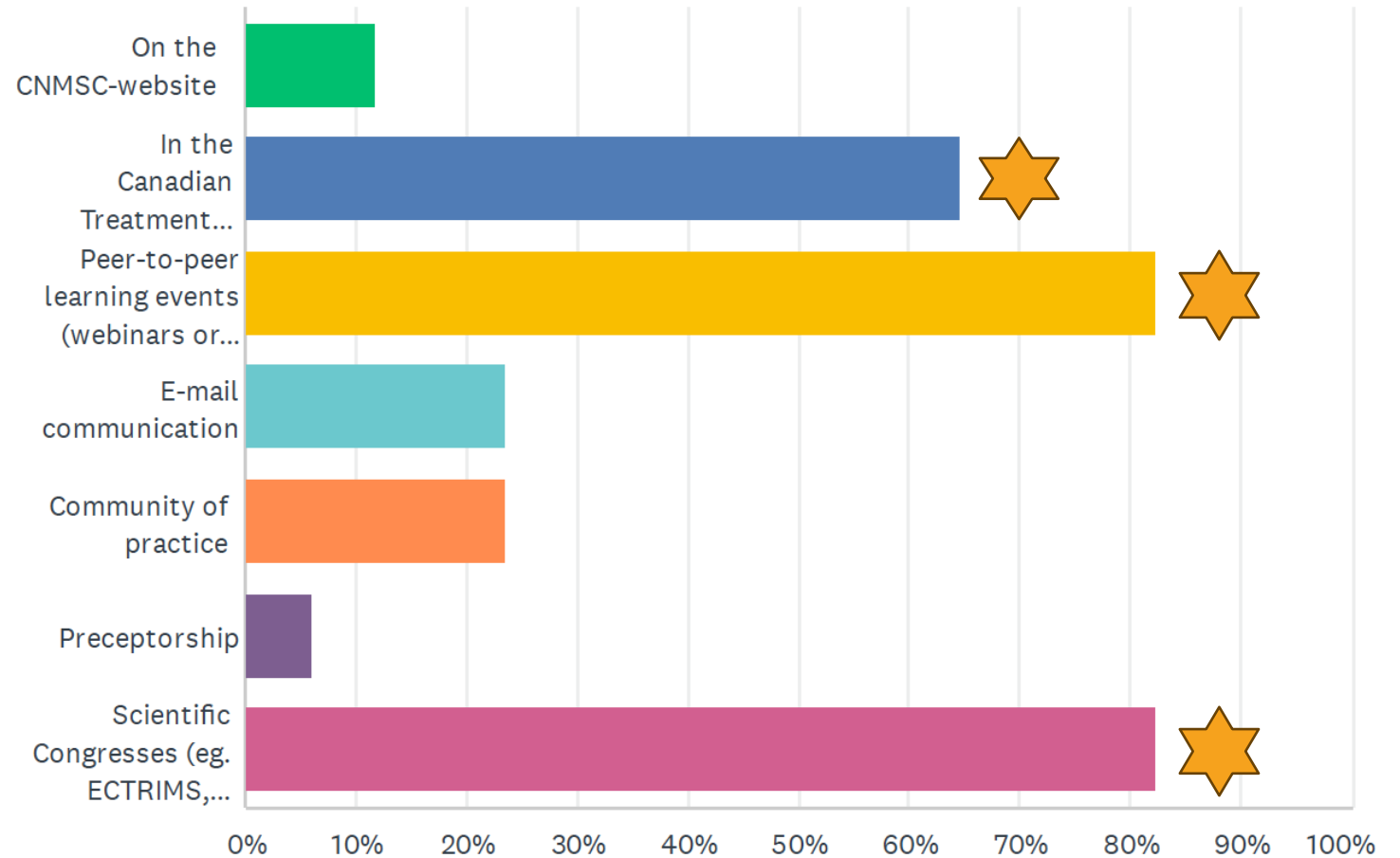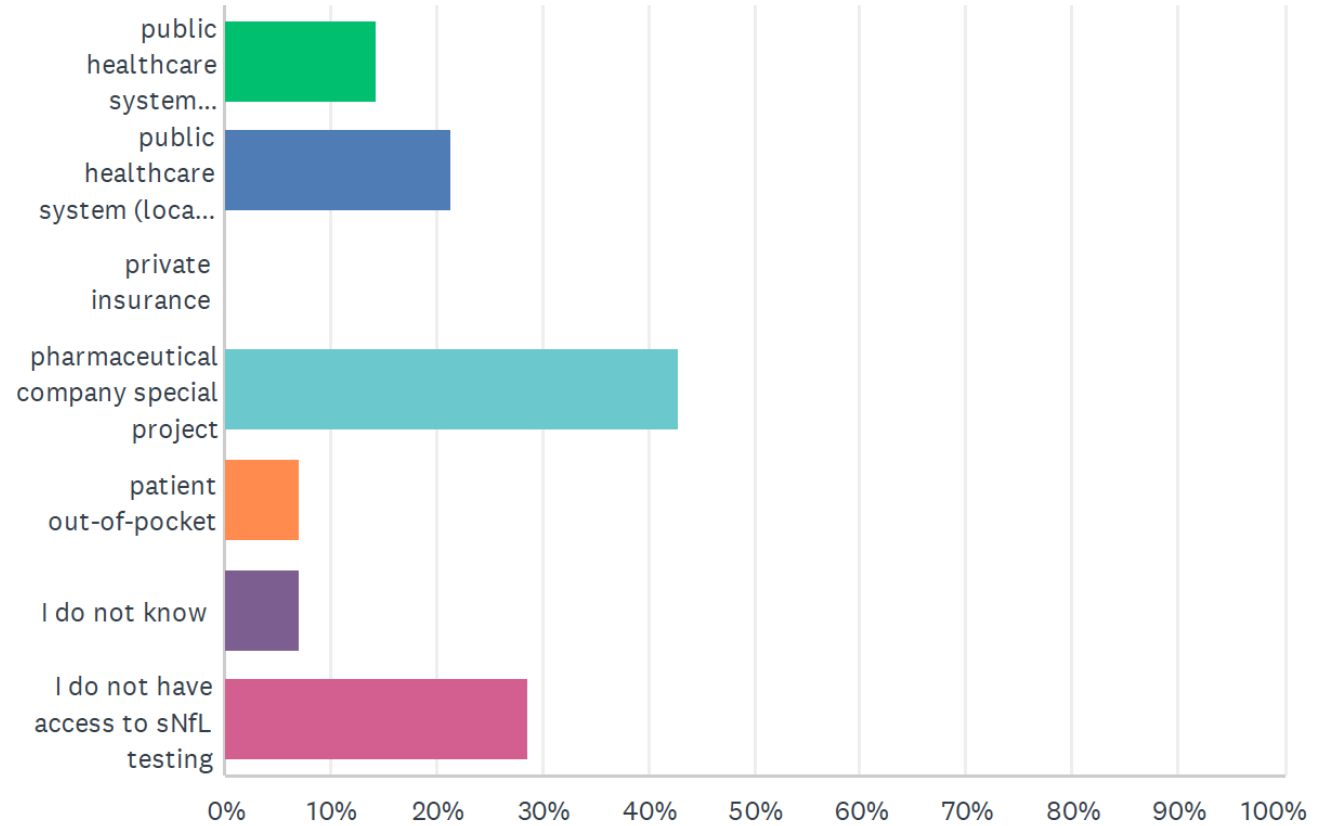
# 12. PLEASE CHARACTERIZE YOUR CURRENT CLINICAL EXPERIENCE (OUTSIDE OF RESEARCH/CLINICAL TRIALS) WITH SNFL
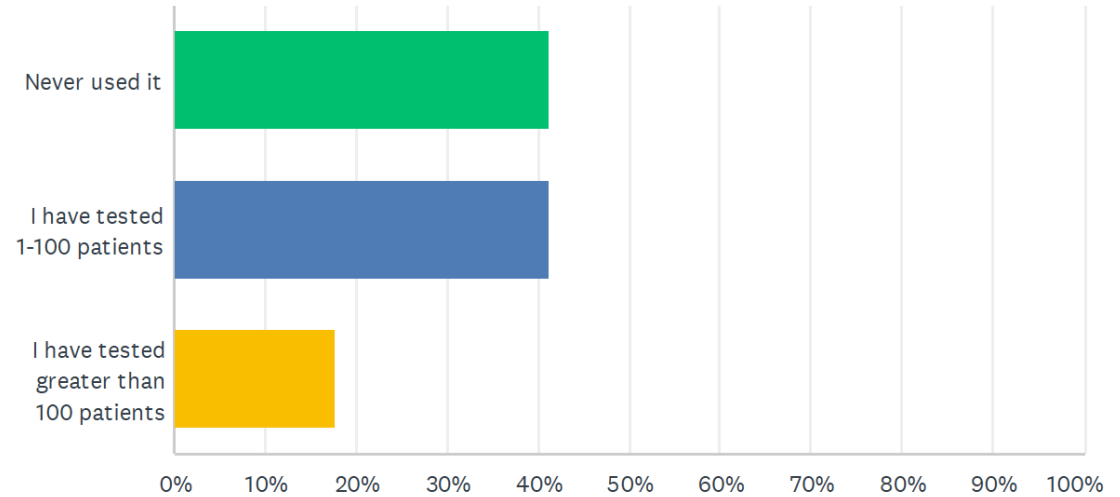


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Never used it | 41.18% | 7 |
| I have tested 1-100 patients | 41.18% | 7 |
| I have tested greater than 100 patients | 17.65% | 3 |
| TOTAL | | 17 |

# 13. IF YOU HAVE ACCESS TO SNFL IN YOUR CLINICAL PRACTICE, WHO IS COVERING THE COSTS (PLEASE SELECT ALL THAT APPLY)
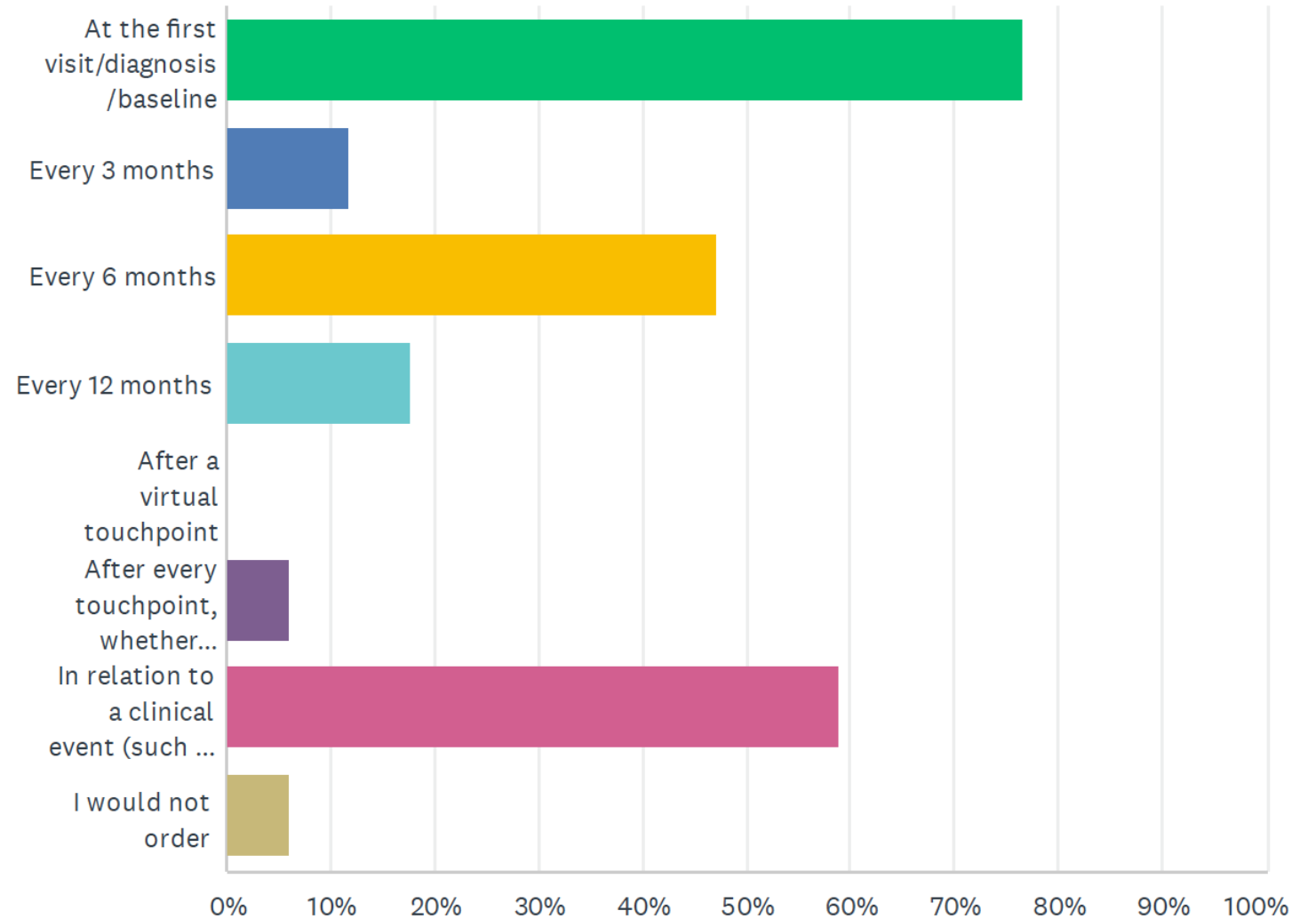
# 14. I CURRENTLY ORDER SNFL TESTING IN MY CLINICAL PRACTICE (SELECT ALL THAT APPLY)
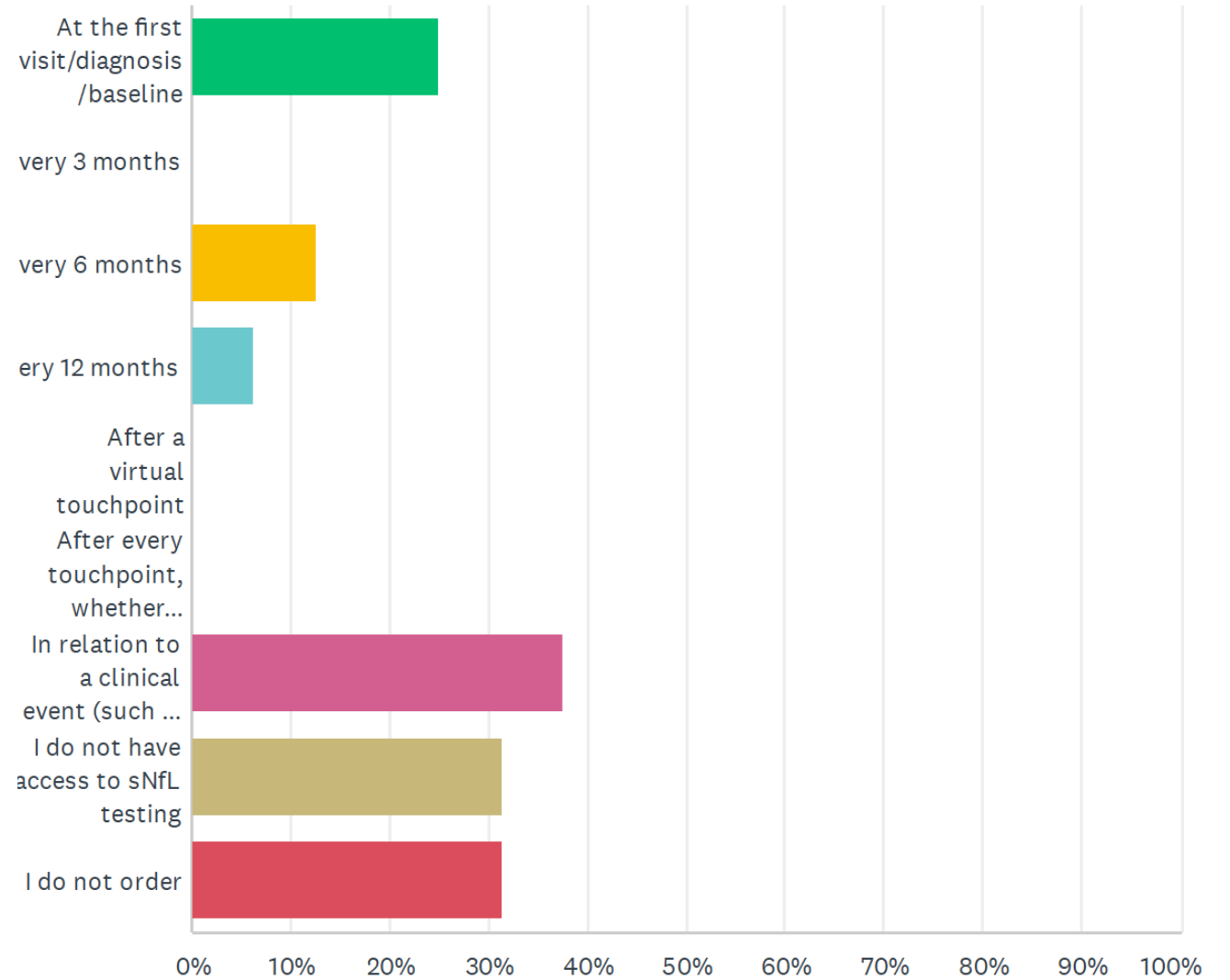
# 15. IF I COULD, I WOULD ORDER SNFL TESTING IN MY CLINICAL PRACTICE (CHECK ALL THAT APPLY)

## 16. PLEASE RANK IN ORDER OF IMPORTANCE (1-MOST USEFUL – 8-LEAST USEFUL) THE POPULATION WHERE THE RESULTS OF SNFL COULD BE THE MOST USEFUL OR HAVE THE MOST IMPACT IN CLINICAL PRACTICE

| | VERY UNIMPORTANT #8 IN RANKING | UNIMPORTANT | SOMEWHAT UNIMPORTANT | NEUTRAL | SOMEWHAT IMPORTANT | IMPORTANT | VERY IMPORTANT |
|---|---|---|---|---|---|---|---|
| In a patient prior to diagnosis (to help with differential diagnosis) | 17.65% 3 | 23.53% 4 | 17.65% 3 | 5.88% 1 | 35.29% 6 | 0.00% 0 | 0.00% 0 |
| In an MS patient shortly after diagnosis (to assist with therapy selection) | 5.88% 1 | 11.76% 2 | 11.76% 2 | 17.65% 3 | 17.65% 3 | 29.41% 5 | 0.00% 0 |
| To monitor an MS patient on higher efficacy DMT therapy | 0.00% 0 | 5.88% 1 | 17.65% 3 | 17.65% 3 | 41.18% 7 | 11.76% 2 | 5.88% 1 |
| To monitor an MS patient through switch in DMT therapy | 0.00% 0 | 0.00% 0 | 5.88% 1 | 23.53% 4 | 23.53% 4 | 17.65% 3 | 17.65% 3 |
| To monitor an MS patient that appears stable on DMT therapy | 0.00% 0 | 0.00% 0 | 11.76% 2 | 11.76% 2 | 29.41% 5 | 29.41% 5 | 5.88% 1 |
| To monitor an MS patient through de-escalation or discontinuing DMt therapy | 0.00% 0 | 0.00% 0 | 0.00% 0 | 5.88% 1 | 11.76% 2 | 47.06% 8 | 23.53% 4 |
| To monitor an MS patient with vague symptoms (to rule in or out relapse) | 0.00% 0 | 0.00% 0 | 0.00% 0 | 5.88% 1 | 17.65% 3 | 35.29% 6 | 29.41% 5 |
| To monitor an MS patient for PIRA (progression independent of relapses) | 5.88% 1 | 11.76% 2 | 11.76% 2 | 5.88% 1 | 23.53% 4 | 29.41% 5 | 11.76% 2 |

17. IF YOU INTEND TO INTEGRATE SNFL INTO YOUR CLINICAL PRACTICE BUT HAVE NOT BEEN ABLE TO DO SO AT PRESENT, WHAT IS PREVENTING YOU? (SELECT ALL THAT APPLY)
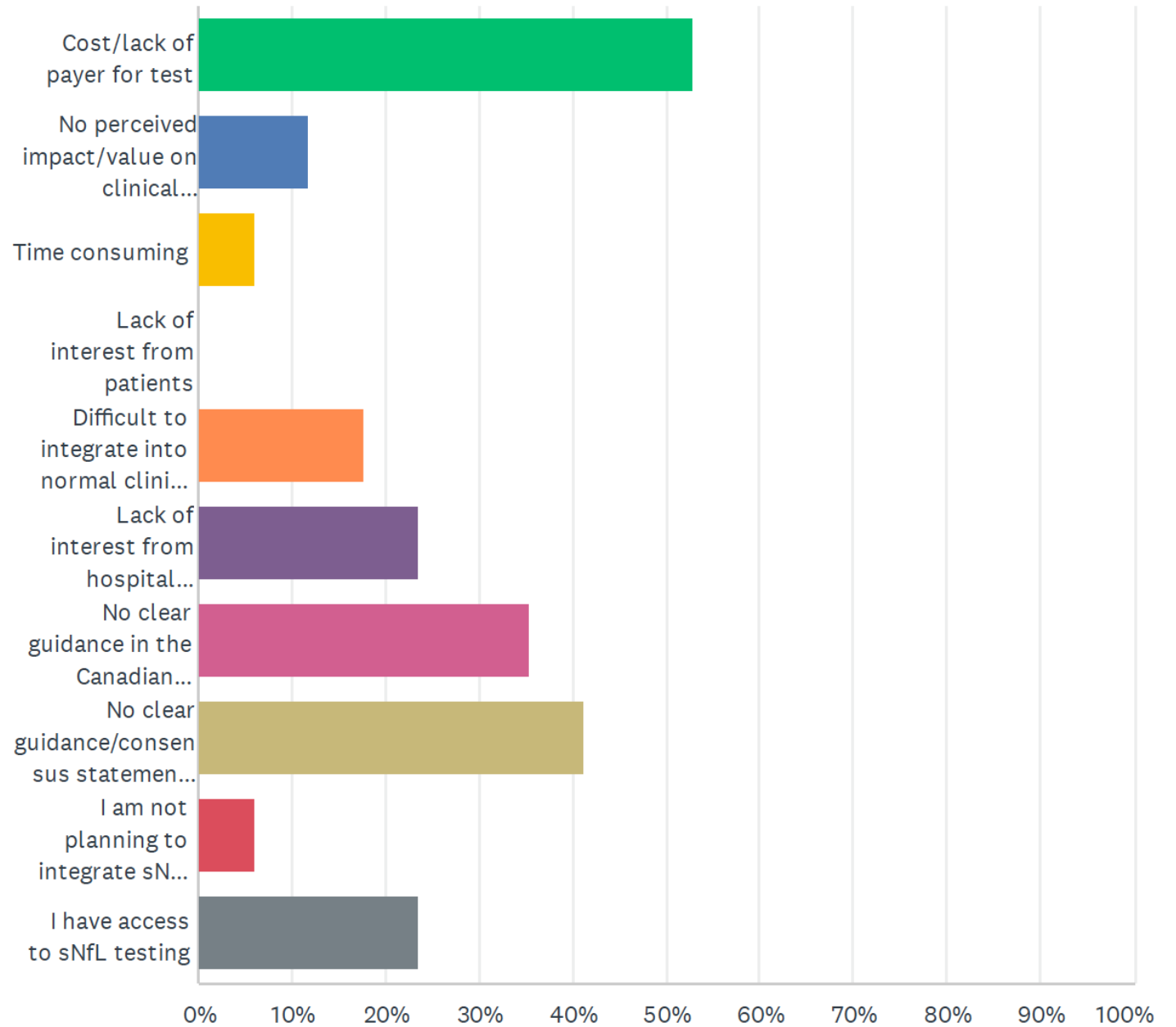
18. IF YOU WOULD LIKE TO USE BIOMARKERS SUCH AS SNFL FOR YOUR ROUTINE CLINICAL PRACTICE, ARE YOU AWARE OF THE PROCESS FOR SECURING PUBLIC ACCESS THROUGH YOUR LABORATORY AND/OR HOSPITAL AND/OR PROVINCE?
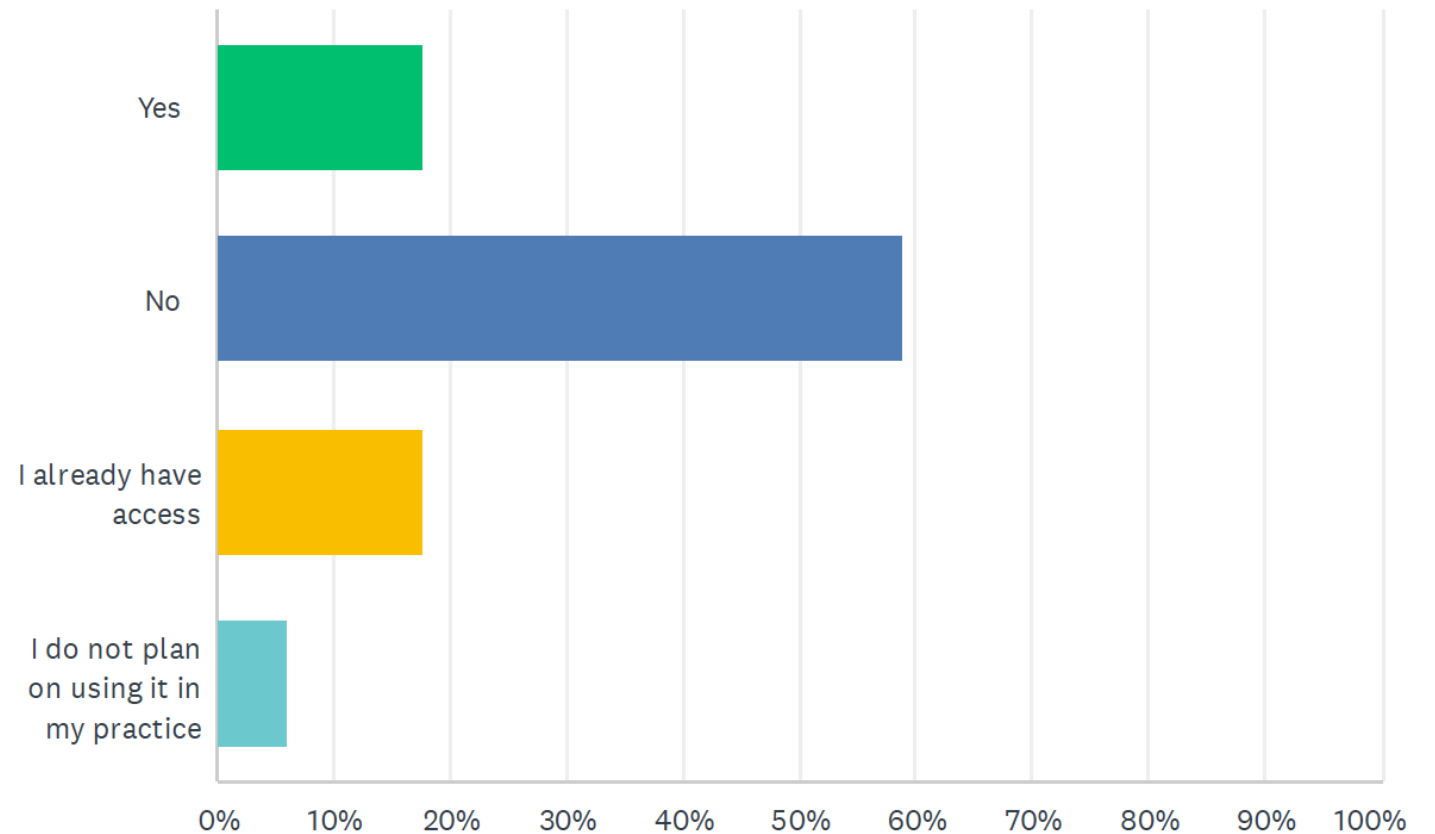
# 19. MY PROVINCE COVERS THE COSTS OF ROUTINE SNFL TESTING THROUGH THE SAME PROCESS AS OTHER STANDARD BLOOD TESTS
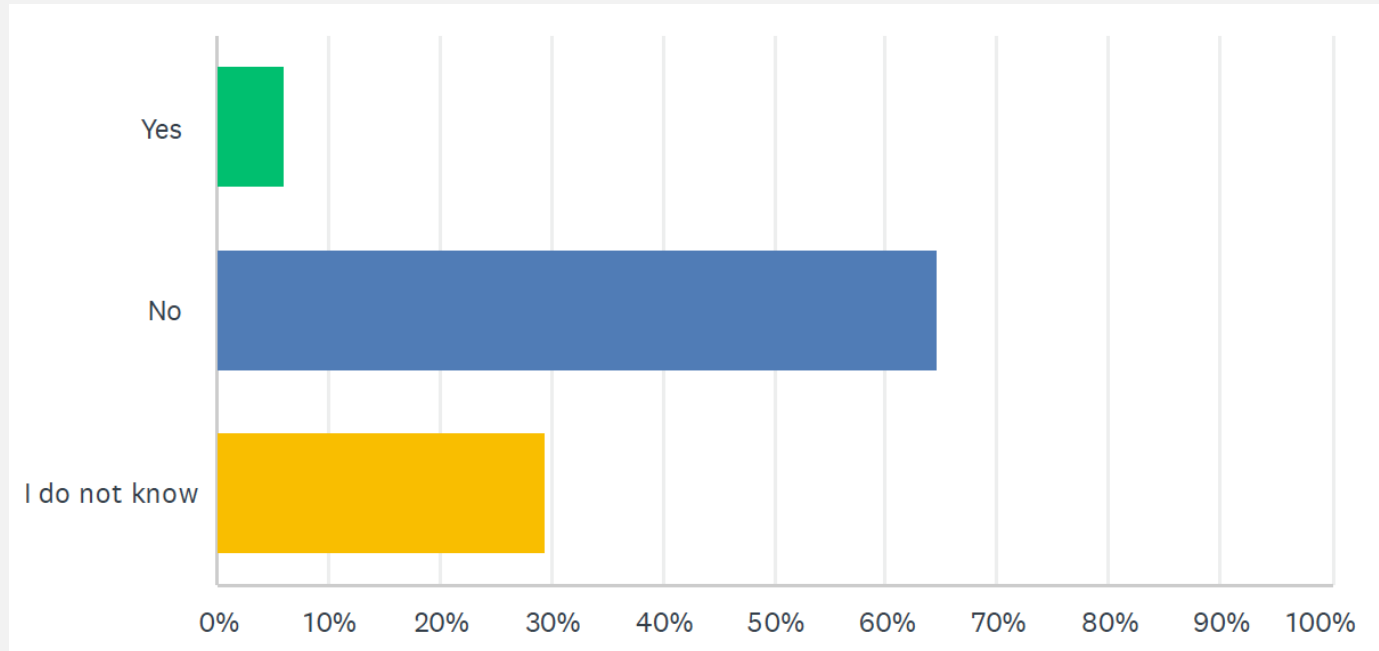
# 20. IF YOUR PROVINCE DOES NOT DEFRAY THE COSTS OF ROUTINE SNFL TESTS, ARE YOU AWARE OF THE TEST BEING REIMBURSED BY THE PUBLIC HEALTHCARE SYSTEM IN CERTAIN LOCATIONS?
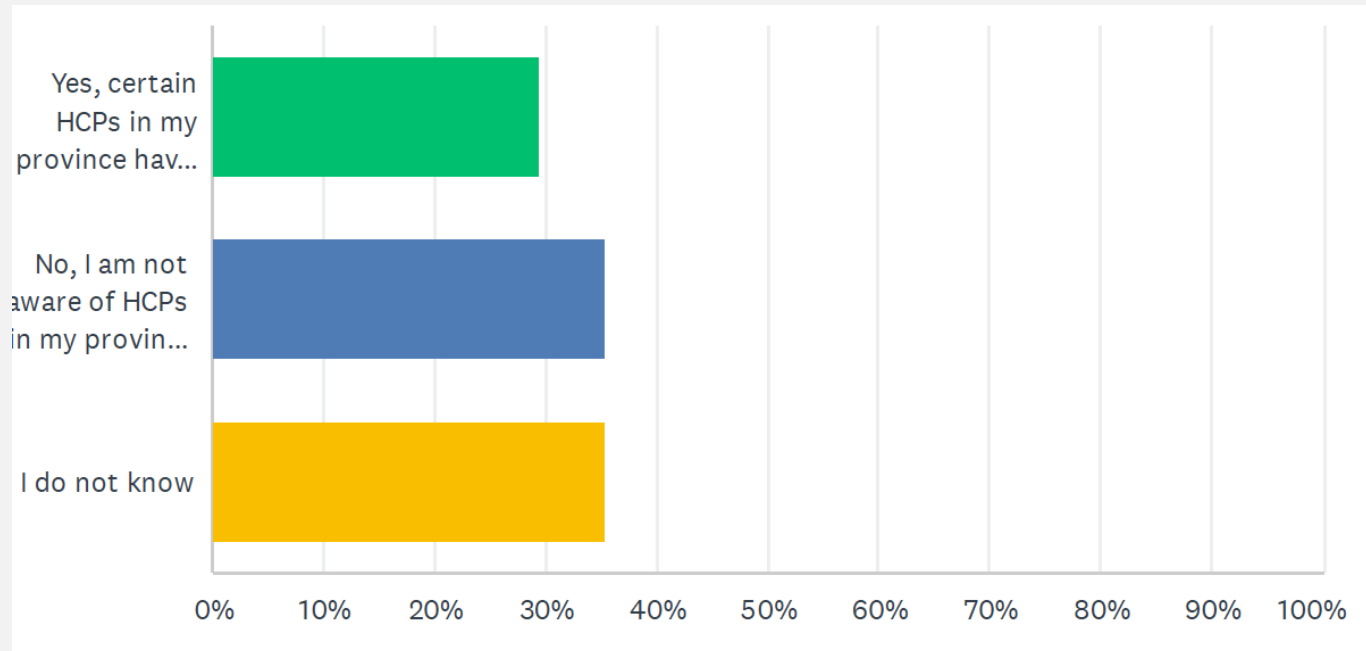
# 21. PLEASE SELECT THE ANSWER THAT MOST REFLECTS YOUR PRACTICE

| | NEVER | RARELY | SOMETIMES | REGULARLY | ALL THE TIME | TOTAL | WEIGHTED AVERAGE |
|---|---|---|---|---|---|---|---|
| My patients are asking me about novel fluid biomarkers such as sNfL | 58.82% 10 | 29.41% 5 | 11.76% 2 | 0.00% 0 | 0.00% 0 | 17 | 1.53 |
| I am talking to my patients about novel fluid biomarkers such as sNfL | 23.53% 4 | 23.53% 4 | 23.53% 4 | 29.41% 5 | 0.00% 0 | 17 | 2.59 |

# CONCLUSIONS

- Most could use sNfL in addition to other tests to monitor patients in various scenarios
  - Best to use after diagnosis, about every 6 to 12 months, or to monitor patients during DMT switch or de-escalation/stopping
- Many feel uncertain about how to use sNfL optimally
- Majority welcome education about how to use sNFL
  - Mostly through educational peer events and conferences, as well as in Canadian treatment optimization guidelines
- There is poor access to sNfL across the country outside of pharmaceutical company support at this time