

Differences in General and Family Practice and Sport and Exercise Medicine Physicians' Concussion Knowledge, Patterns of Practice and Learning Preferences from 2013 and 2022

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BACKGROUND

- Increased concussion awareness over recent years has fostered extensive new developments in published guidelines and tools for evaluation and for guiding return-to-play (RTP) decisions [1,2].
- Unfortunately, this diverse range of resources has led to inconsistent knowledge and clinical practice patterns among physicians [3-6].

AIMS

- To assess various changes over the past decade in (1) physician knowledge about concussion, (2) their patterns of practice, and (3) their learning preferences.

METHODS

- A cross-sectional online survey was distributed in 2013 and repeated in 2022 to practicing physicians who see patients with concussion, in the Ontario Medical Association (OMA) Sections of General and Family Practice (GFP) and Sport and Exercise Medicine (SEM).

- Response Rates:**
- 2013: GFP 225/12,168 (1.8%), SEM 85/594 (14.3%)
 - 2022: GFP 216/15,674 (1.4%), SEM 35/696 (5.0%)

RESULTS

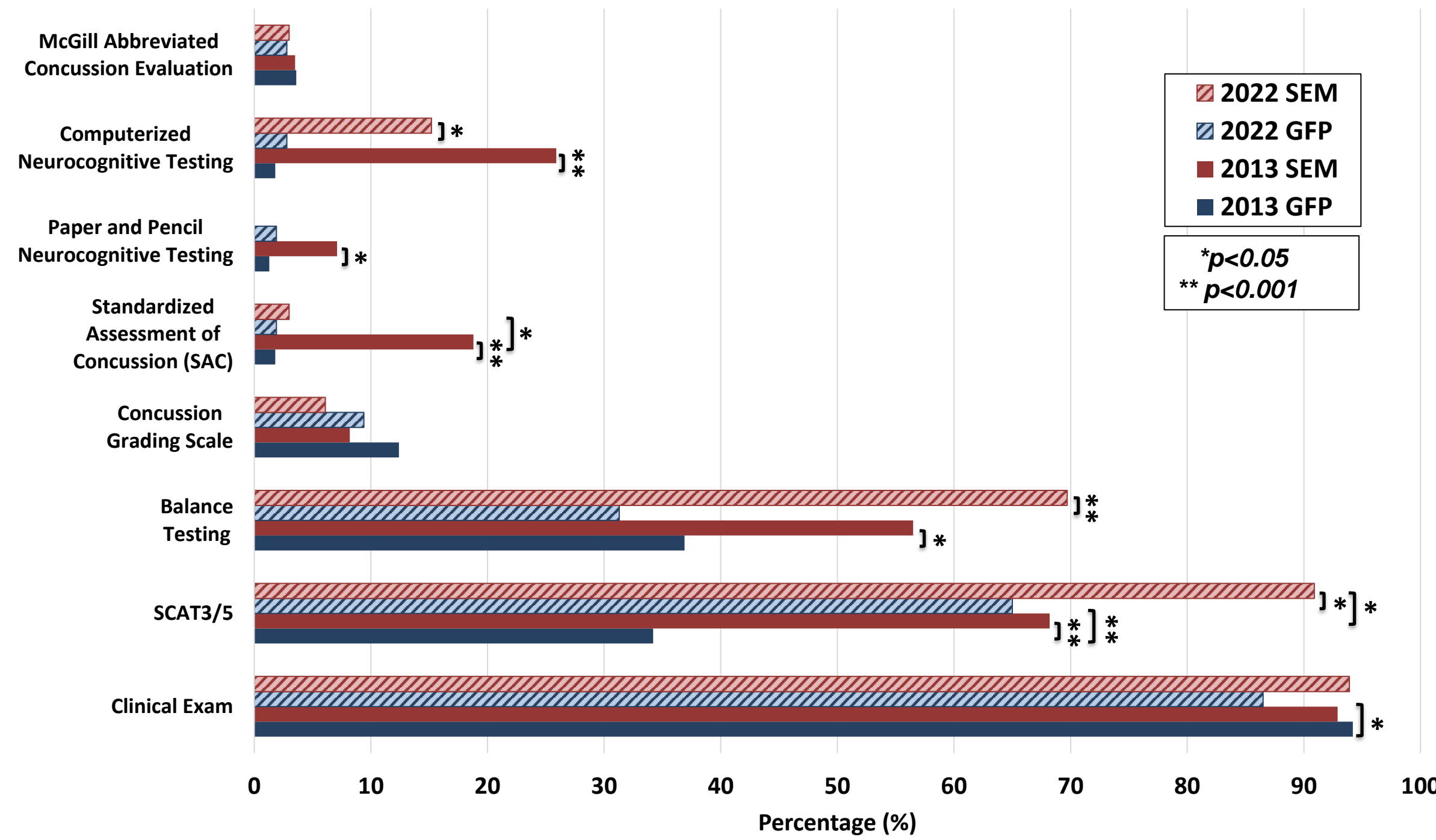
Demographics

	2013 % (n)	2022 % (n)
Do you see concussion in practice? *		
Yes, over a year ago	4.4% (14)	12.7% (32)
Yes, within the past 1 year	21.1% (67)	23.3% (59)
Yes, within the past 3 months	74.5% (237)	64.0% (162)
Years in Practice		
<5 years	16.4% (52)	14.3% (36)
Greater than 5 years, but less than 10	11.3% (36)	13.1% (33)
Greater than 10 years, but less than 15	8.5% (27)	9.9% (25)
>15 years	63.8% (203)	62.7% (158)
Region of Practice		
Rural (population <= 20,000)	24.8% (79)	22.8% (57)
Urban (population >20,000)	75.2% (239)	77.2% (193)
Primary Work Setting		
Private clinical practice	50.6% (161)	43.8% (109)
Academic practice (educational institution) *	23.6% (75)	15.7% (39)
Primary Care Network (PCN)	22.0% (70)	20.9% (52)
Solo practice	11.0% (35)	9.2% (23)
Group practice	54.1% (172)	49.8% (124)
ER *	22.0% (70)	15.3% (38)
Walk-in or Acute Care Clinic	21.7% (69)	17.3% (43)
Employed health system	1.3% (4)	0% (0)
Military	1.6% (5)	0.4% (1)
Gender		
Female	50.8% (159)	57.3% (141)
Male	49.2% (154)	42.7% (105)
Medical School for MD		
University of Alberta	1.3% (4)	1.6% (4)
University of British Columbia	1.6% (5)	0.4% (1)
University of Calgary	1.6% (5)	2.4% (6)
Dalhousie University	3.5% (11)	2.8% (7)
University of Manitoba	1.9% (6)	3.2% (8)
McGill University	3.8% (12)	3.2% (8)
McMaster University	13.8% (44)	13.7% (34)
Memorial University	0.9% (3)	1.6% (4)
University of Montreal	0.6% (2)	0.8% (2)
Northern Ontario School of Medicine	0.6% (2)	2.4% (6)
University of Ottawa	11.6% (37)	8.5% (21)
Queens' School of Medicine	11.3% (36)	8.1% (20)
University of Saskatchewan	0.3% (1)	0.8% (2)
University of Toronto	22.0% (70)	22.6% (56)
University of Western Ontario	13.5% (43)	11.7% (29)
Outside of Canada	10.4% (33)	16.1% (40)

*p<0.05

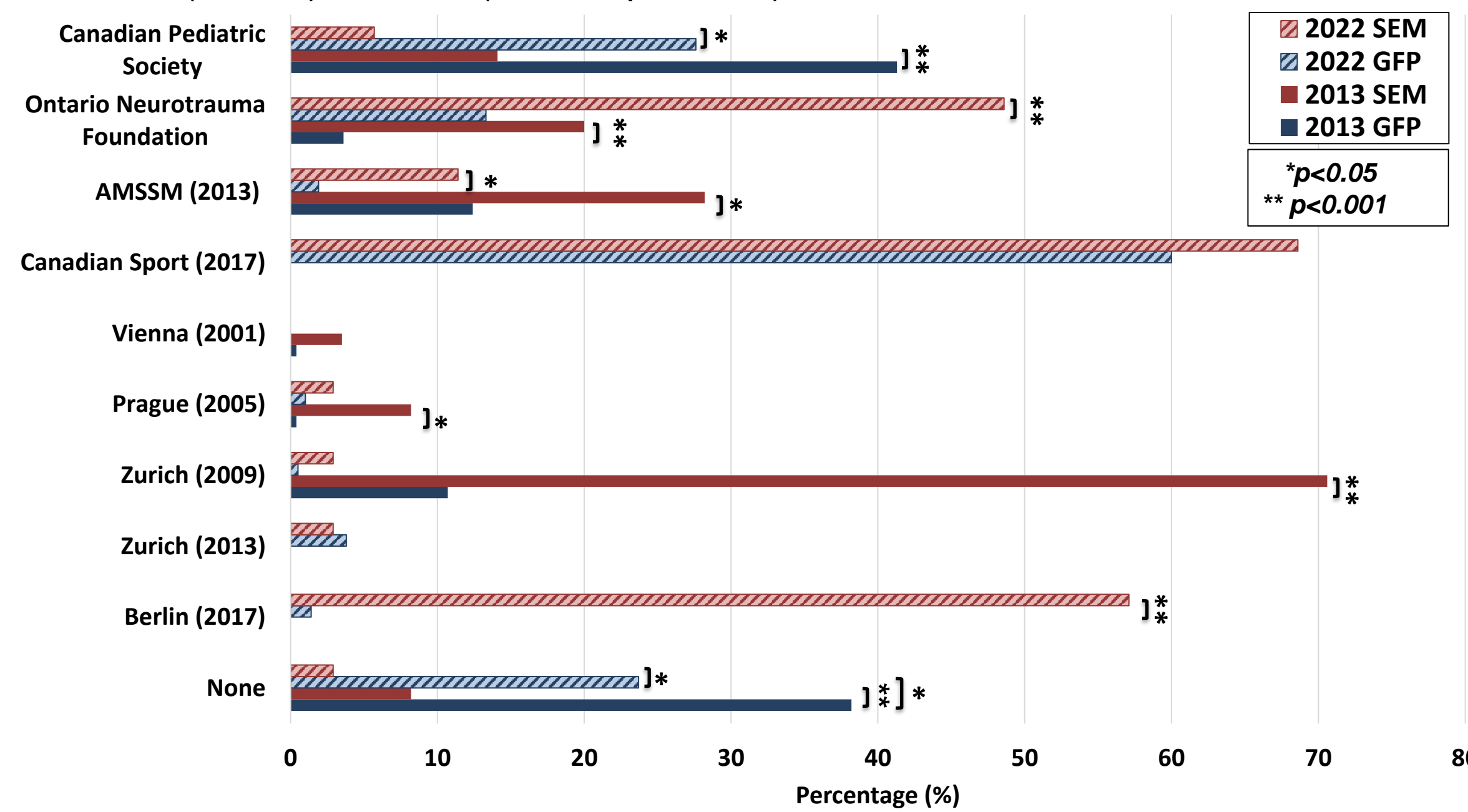
Initial Assessment Tools

- For initial assessment, use of the SAC (SEM only) and clinical exam (GFP only) decreased, but use of the SCAT 3/5 increased from 2013 to 2022.

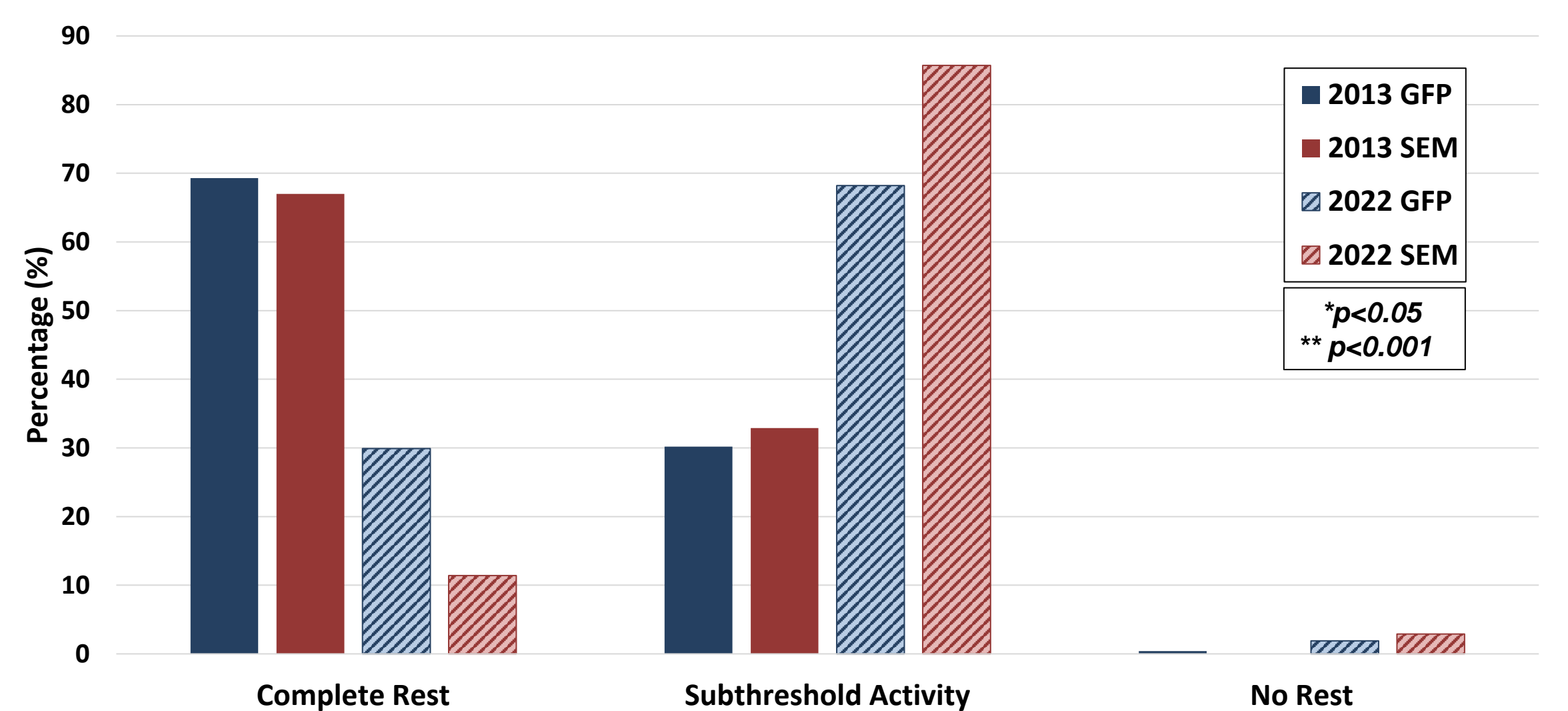


Use of Guidelines

- Overall non-reliance on published guidelines significantly decreased from 2013 (29.9%) to 2022 (21.4%; p=0.022).



Physical Rest Recommendations

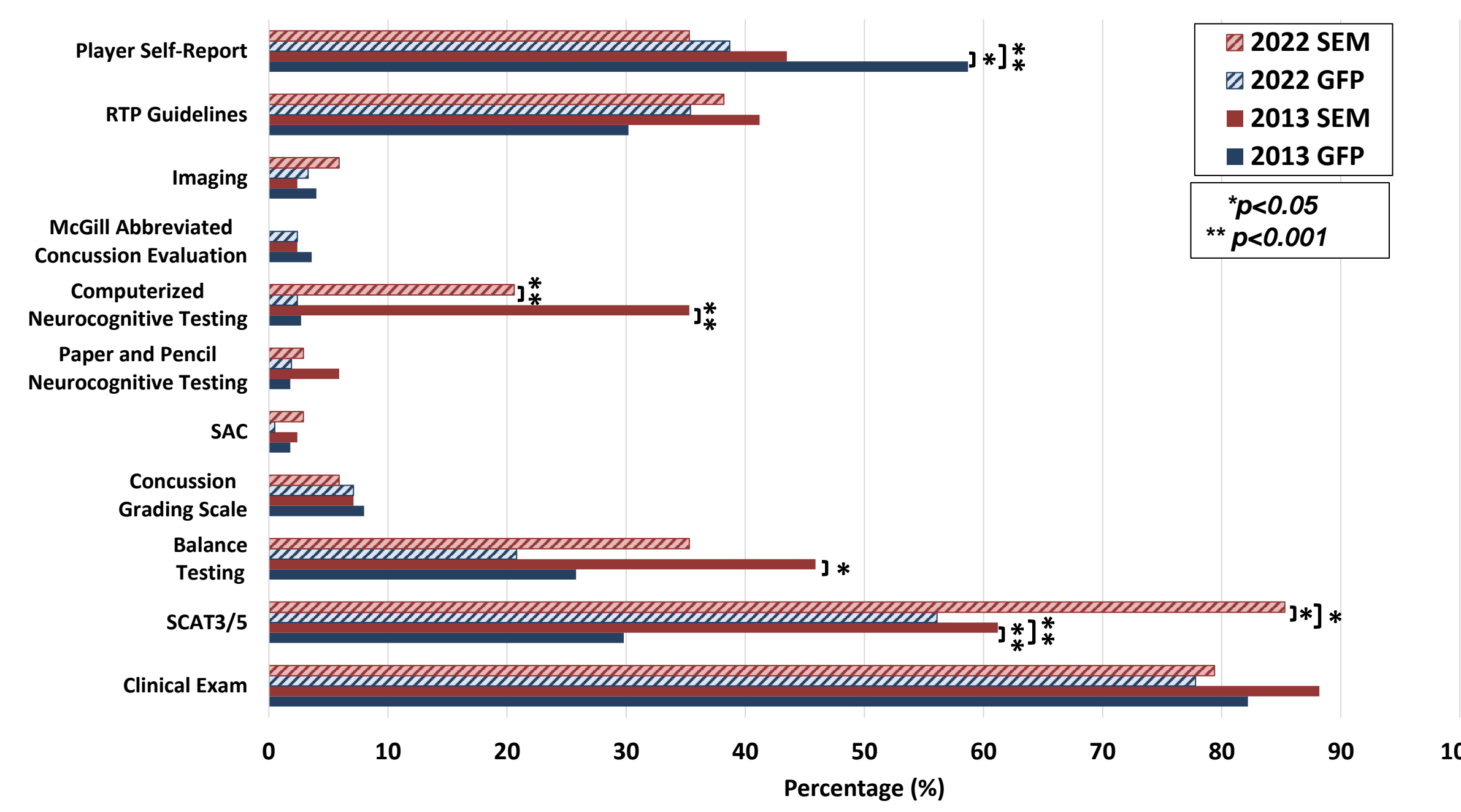


- PHYSICAL REST recommendations were significantly different between 2013 and 2022 (p<0.001) and differed by section in 2022 (p=0.049) but not in 2013 (p=0.768). Recommendations among GFP physicians changed between 2013 and 2022 (p<0.001) and among SEM physicians (p<0.001).

RESULTS

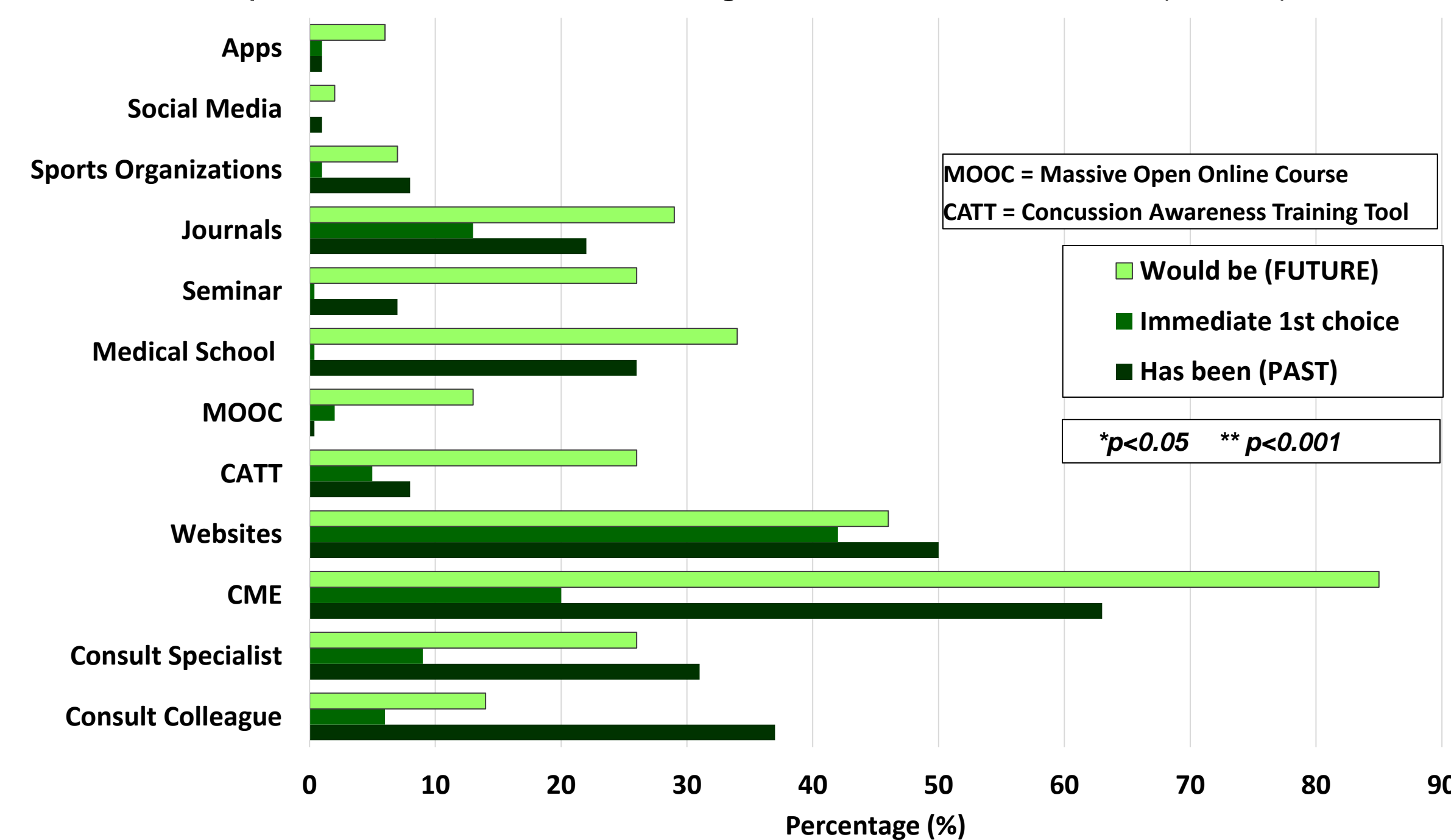
Return-to-Play Tools

- For RTP decisions, use of the SCAT 3/5 increased, but use of balance testing, computerized neurocognitive testing and player self-report decreased from 2013 to 2022.

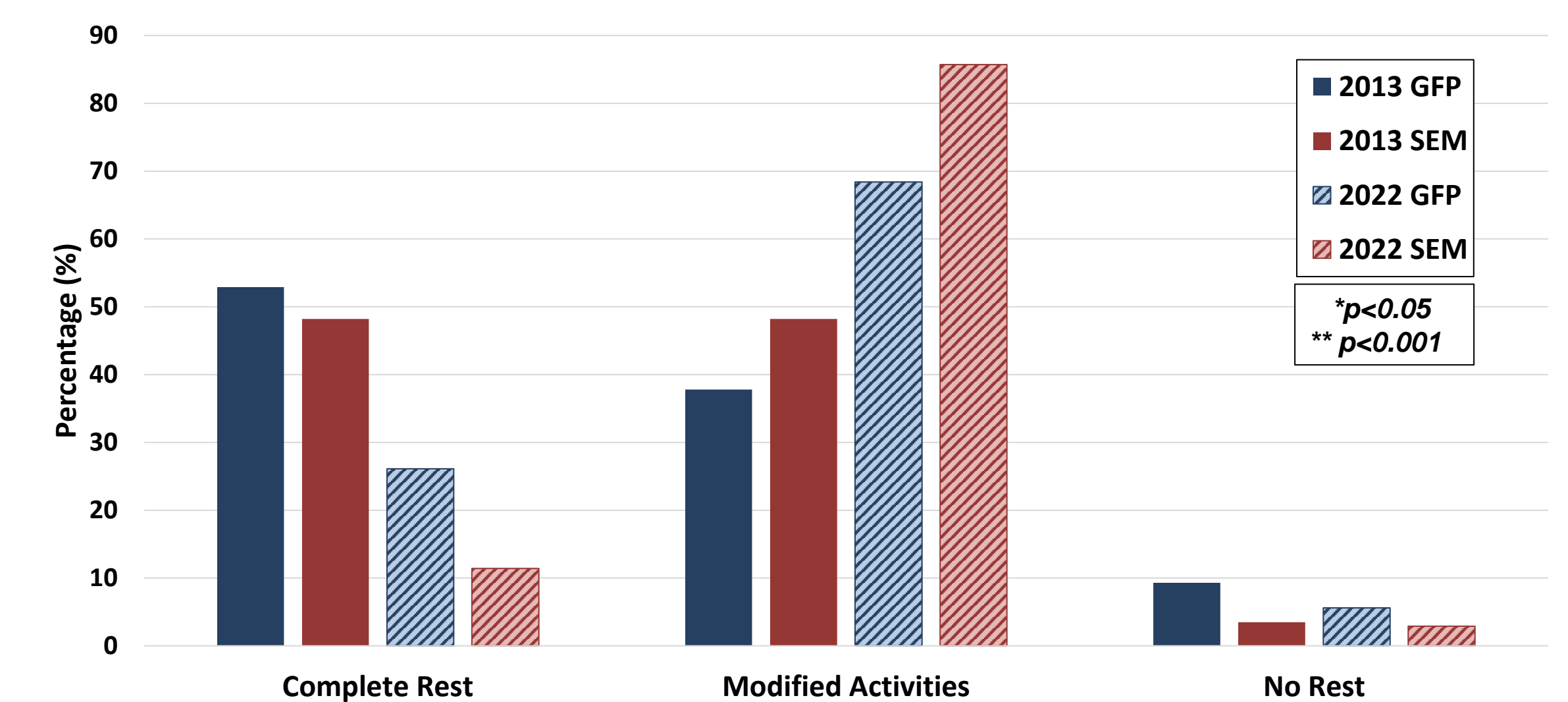


Learning Preferences

- In 2022, the most popular past resource for learning about concussion was CME (63.5%), the most popular immediate resource was websites (42.1%) and the preferred method of learning in the future was CME (85.0%).



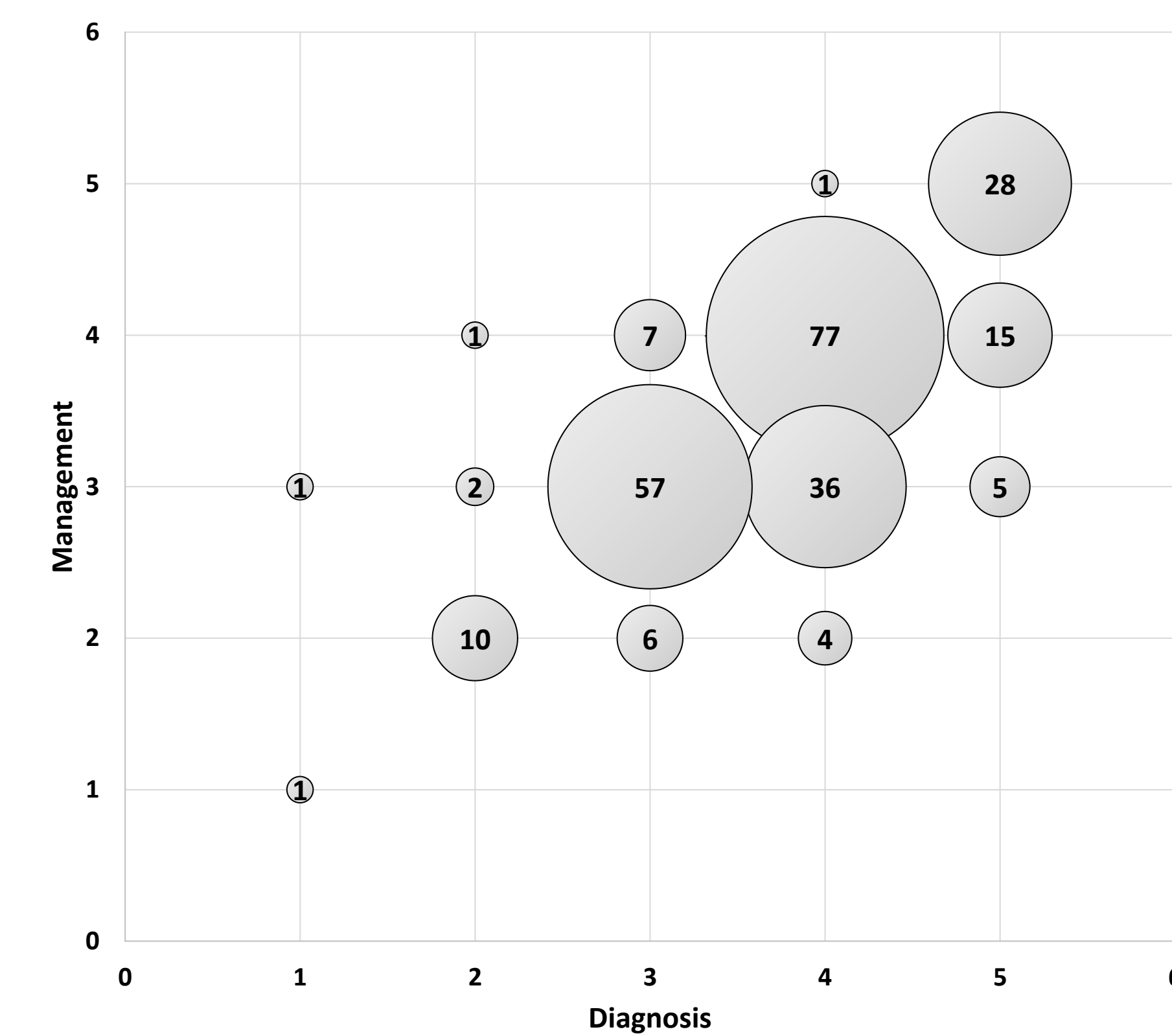
Cognitive Rest Recommendations



- COGNITIVE REST recommendations were significantly different between 2013 and 2022 (p<0.001) but did not differ by section in 2013 (p=0.099) or 2022 (p=0.100). Recommendations among GFP physicians changed between 2013 and 2022 (p<0.001) and among SEM physicians (p<0.001).

Physician Confidence

- Overall, physicians surveyed in 2022 on a Likert scale of 1 (not confident) to 5 (very confident) felt more confident with concussion diagnosis than management.



CONCLUSIONS

- More GFP physicians did not rely on published guidelines than their SEM counterparts in both 2013 and 2022.
- Use of the SCAT 3/5 increased for both initial assessment and RTP decisions in all physicians from 2013 to 2022
- Physical and cognitive rest recommendations shifted significantly from 2013 to 2022 - from recommending complete rest to subthreshold/modified activities.
- Increased awareness and use of the most recent published guidelines may contribute to the changes observed.
- Future educational efforts targeted towards both GFP and SEM physicians should focus on websites and CME.
- Future educational efforts should aim to improve physicians' confidence in management of concussion.

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