



American Board of Neurological Surgery update

RUSSELL R. LONER, M.D.
SECRETARY

www.abns.org



Mission

The broad aim of the AMERICAN BOARD OF NEUROLOGICAL SURGERY (ABNS) is to encourage the study, improve the practice, elevate the standards, and advance the science of neurological surgery and thereby to serve the cause of public health.

The primary purposes of ABNS are to conduct examinations of candidates who voluntarily seek certification and to issue certificates to those who meet the requirements of the board and satisfactorily complete its examinations.



Diplomates

- 8,112 total diplomates (1940)
- 5,945 active diplomates
 - 2,324 time-unlimited
 - 3,621 10-year renewable
- 116 ACGME training programs
 - 1,660 Neurosurgery residents

ABNS Administration



Betsy Koehnen
Chief Administrative
Officer



Kari Bergmann
Residency Program
Coordinator



Susan Butterbaugh
Initial Certification
Coordinator

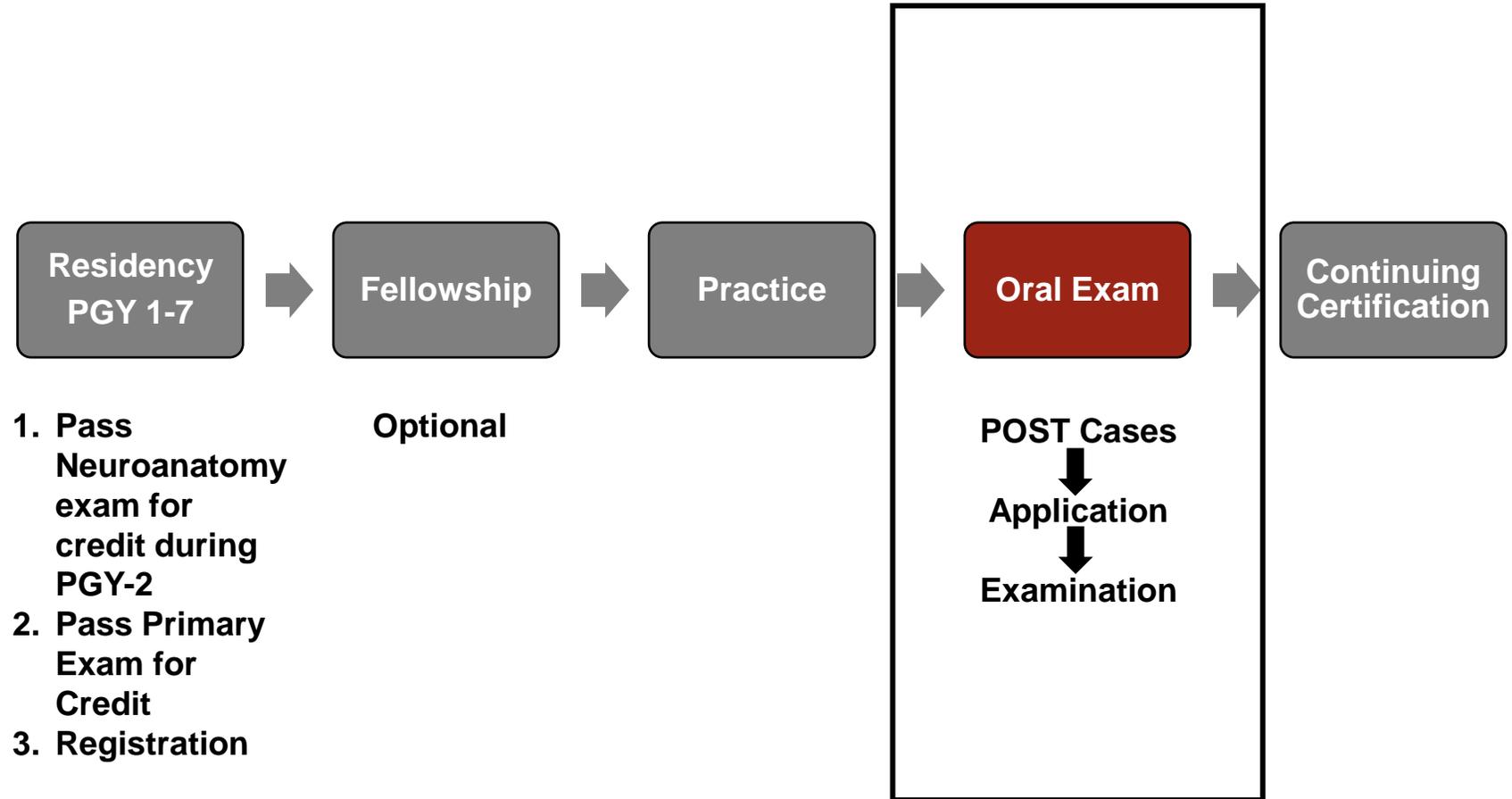
Leann Lepa
Accreditation,
Certification and
Credentialing
Coordinator

James Kester
IT Developer

Kari Bollerman
ABPNS Coordinator



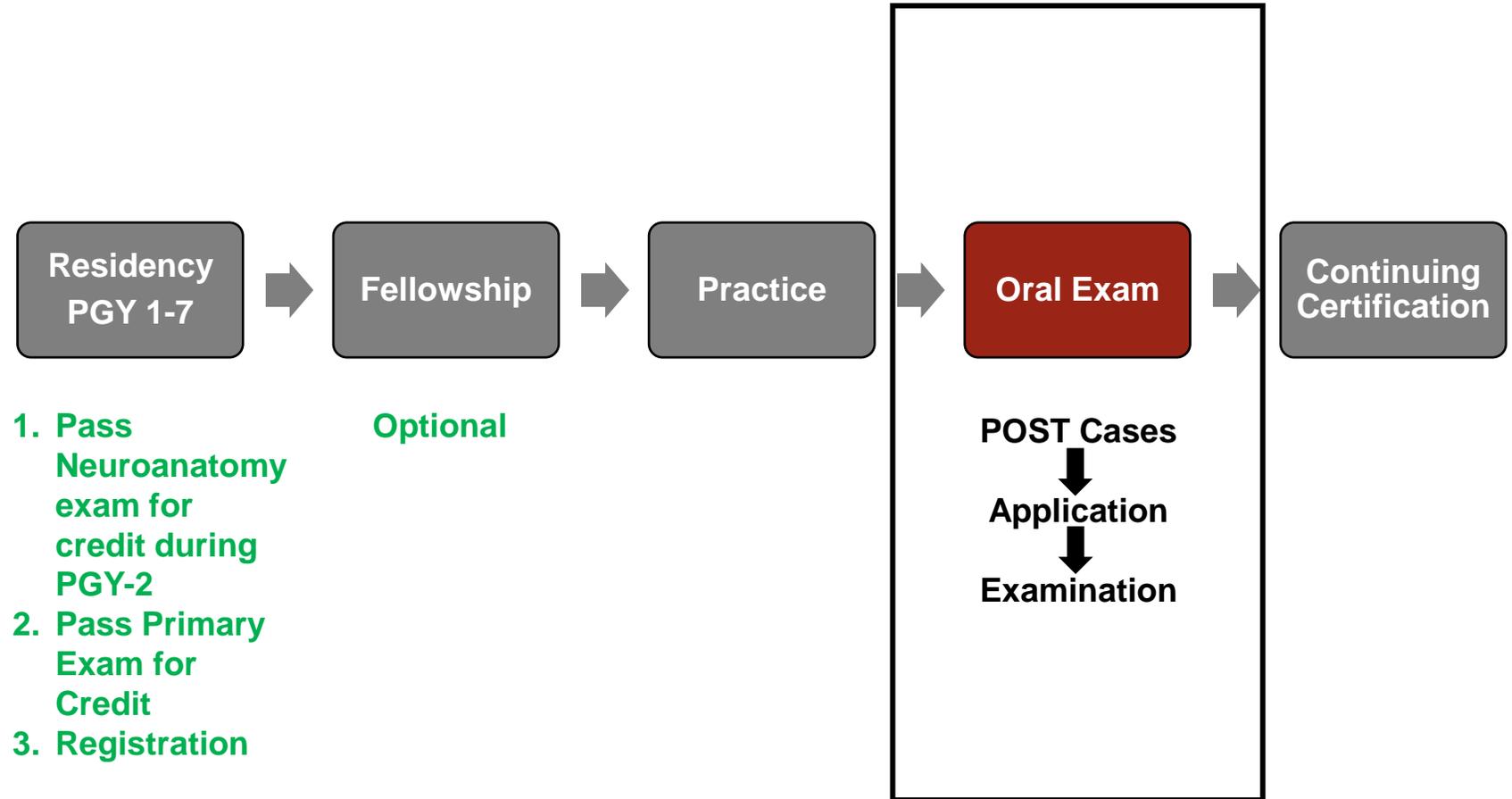
Path to certification



1. Pass Neuroanatomy exam for credit during PGY-2
2. Pass Primary Exam for Credit
3. Registration



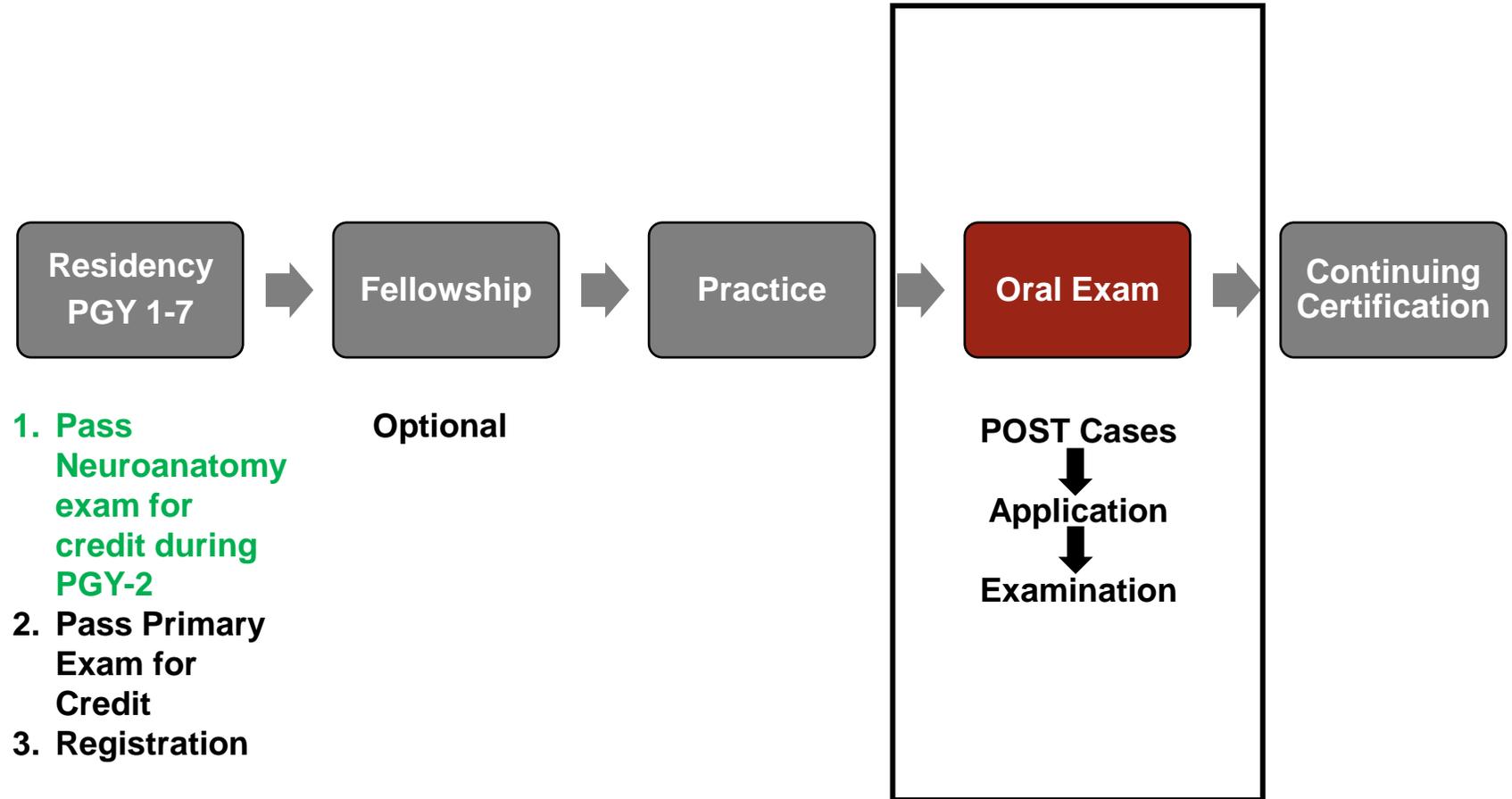
Path to certification



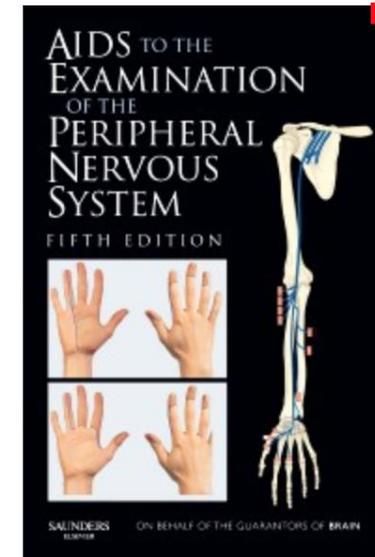
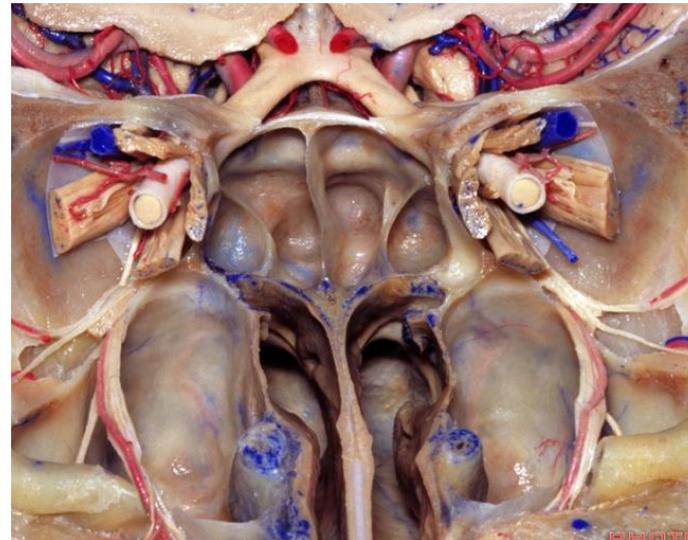
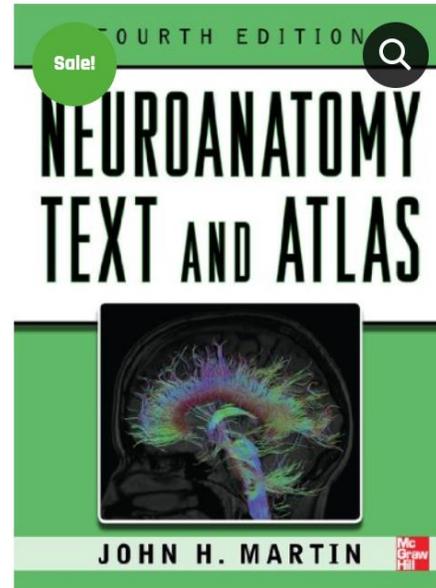
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Path to certification



Neuroanatomy exam



Neuroanatomy exam



Neuroanatomy exam is required in **PGY-2** and **100% correct to pass**

Must be **passed** by **June 30, 2022**



Modifications ongoing to **improve clinical relevance**



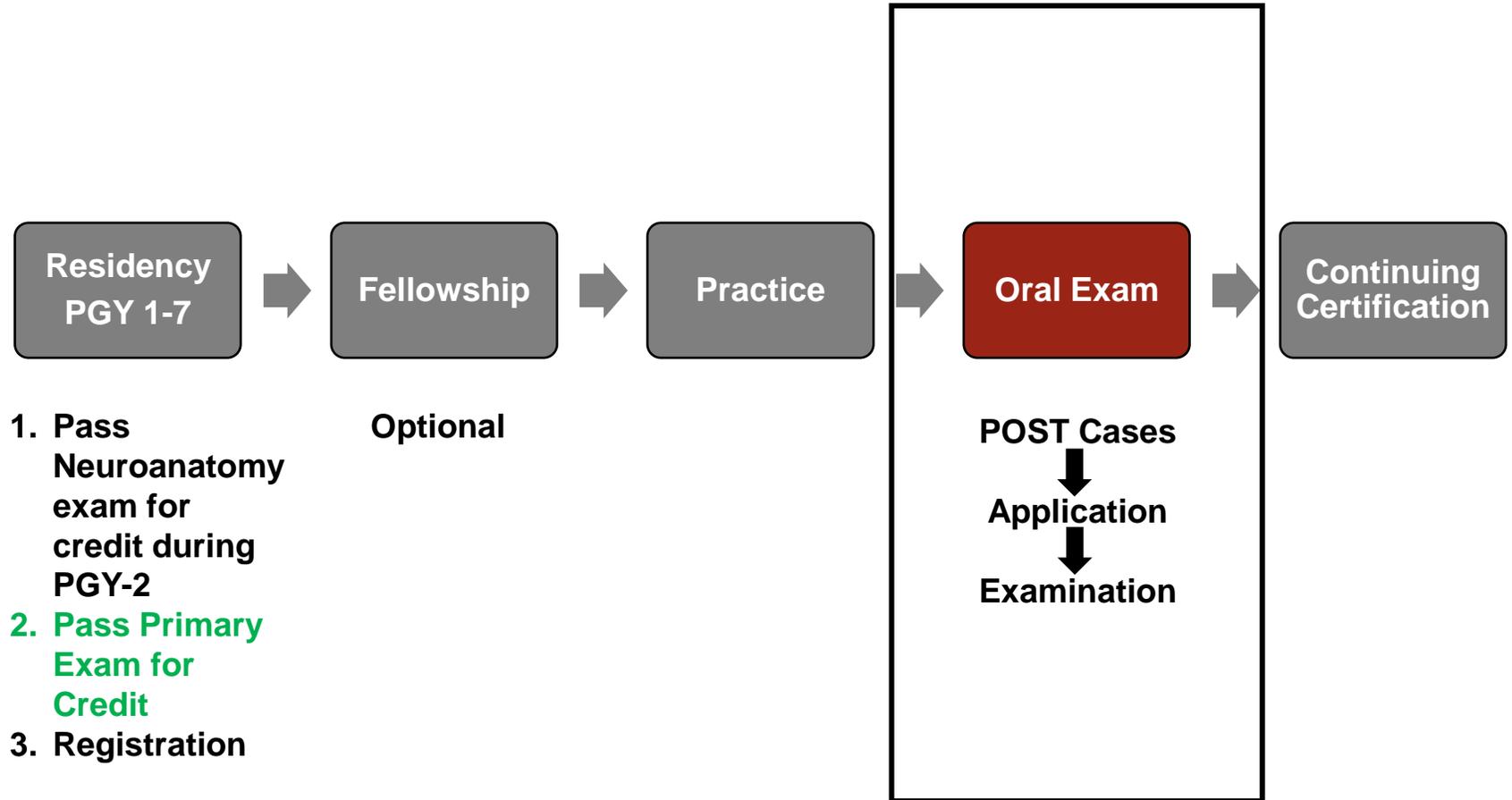
Bylaws **require completion of examination** prior to taking primary examination for credit.

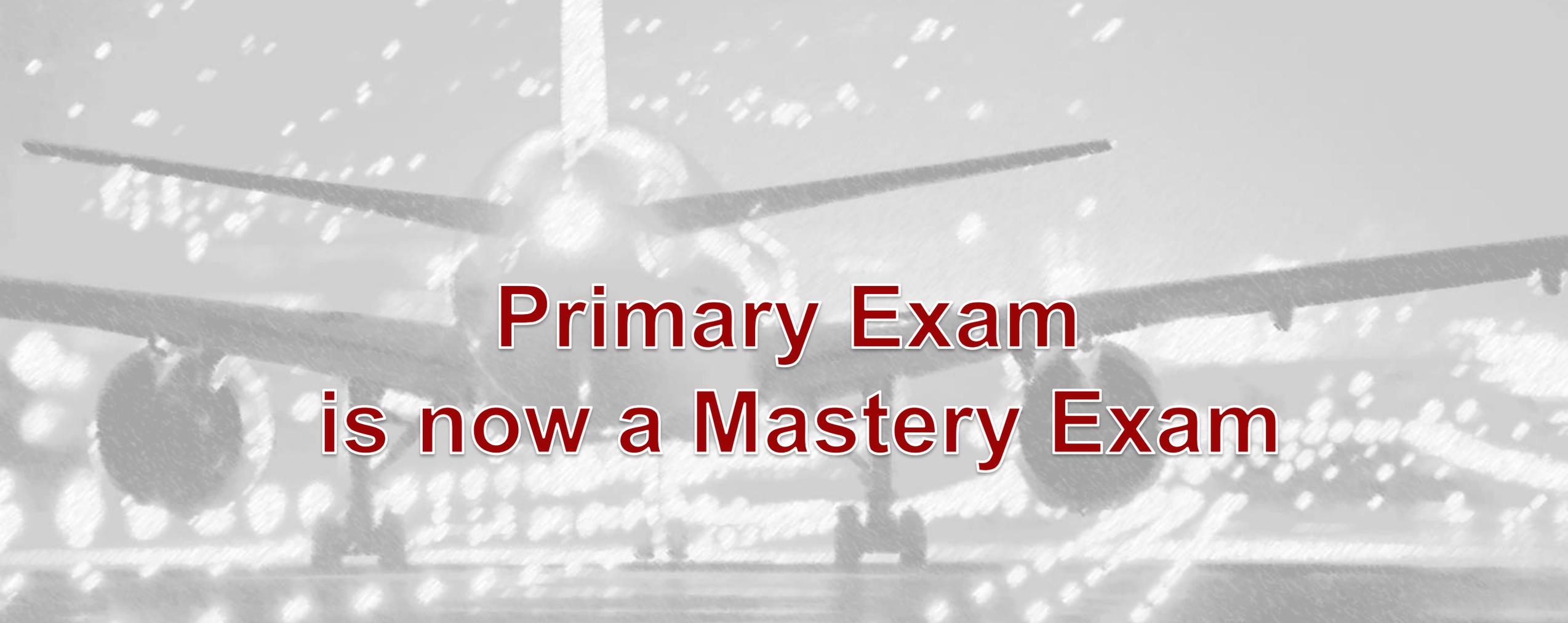


Thank you to **AANS** for **sponsoring website** used by all neurosurgical residents



Path to certification





**Primary Exam
is now a Mastery Exam**

Primary exam features



Secure

No technical/security issues.

Evolving

275 new questions vetted (97 accepted).

Relevant

Exam designed for clinical relevance.

Highest Quality

Approximately 275 question vetted last year (97 questions accepted).

Continuous Reassessment

Rigorous quality control before and after exam. Rejected for factoid, not clinically relevant and poorly written. Post examination evaluation of question performance leads to elimination of another 5 to 15 questions.

Primary exam (2022 Summary)

852 trainees that took exam

- **225 (26%) for credit**
- **627 (74%) for self-assessment**

Fail rate

- **Reference group fail rate was 4.1%**
- **Credit candidate fail rate was 6.2%**

Minimum passing (percent correct) was 69% which is assessed by measuring scores.

To be fair and accurate in assessment after release of stems, a new standard setting was done and test scores are not directly comparable to prior years.



Primary exam question stems



**96,579 visits to website as of
November 2021.**

Compared to 18,056 times as of May 2021.



Topics accessed by PGY

PGY-2, -3: neuroanatomy, neuroimaging

PGY-4, -5: neurology, neurosurgery

**PGY-6, -7: neuroimaging, neurosurgery,
core competencies**

Primary exam

Exam evolution

Transition to mastery examination required new standard setting in April 2022.

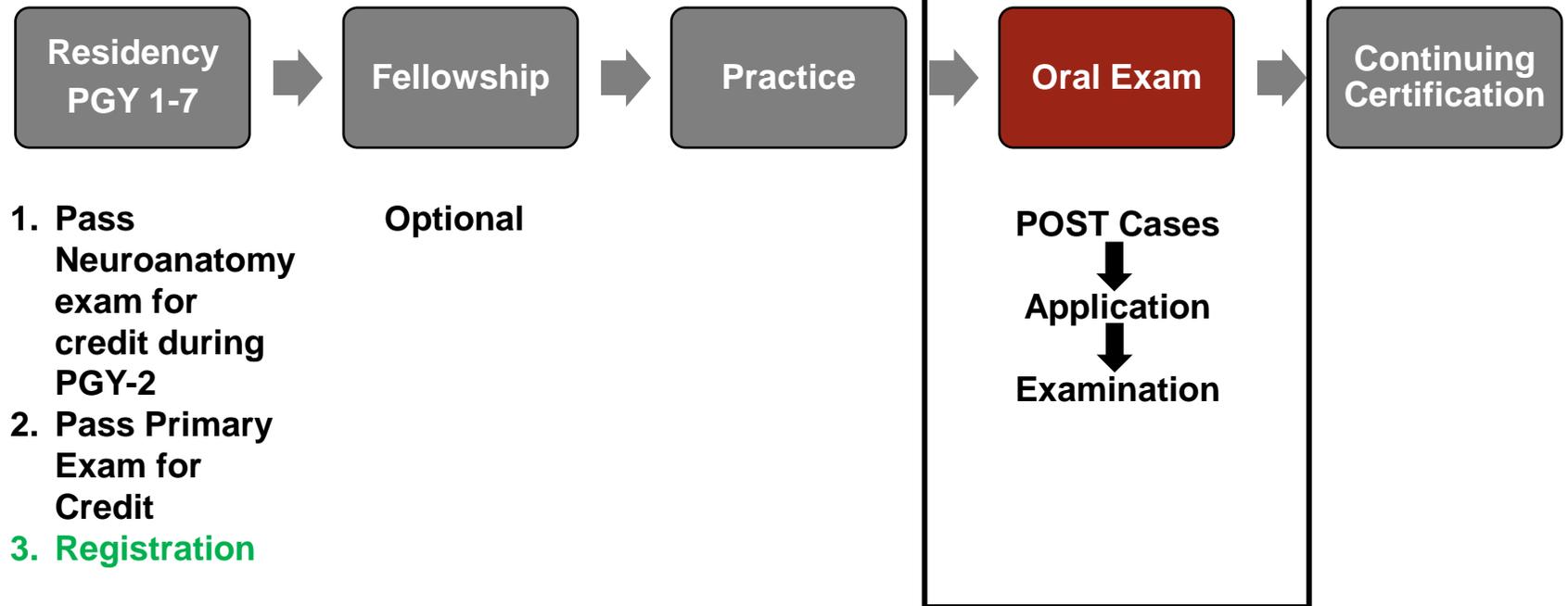
Standard setting will need be performed periodically for next several years.

Passing scores will evolve with the standard setting (will likely change annually).

New platform for question submission should improve “hit rate” and quality of questions.



Path to certification



Path to certification



Registration

Activate Key Login

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Application Deadlines

<input type="checkbox"/> 2016	December 31, 2020
<input type="checkbox"/> 2017*	December 31, 2020
<input type="checkbox"/> 2018	December 31, 2021
<input type="checkbox"/> 2019	December 31, 2022
<input type="checkbox"/> 2020	December 31, 2023
<input type="checkbox"/> 2021	December 31, 2023

NEW REQUIREMENT

Registration must occur before completion of training (residency or fellowship) to be Board Eligible

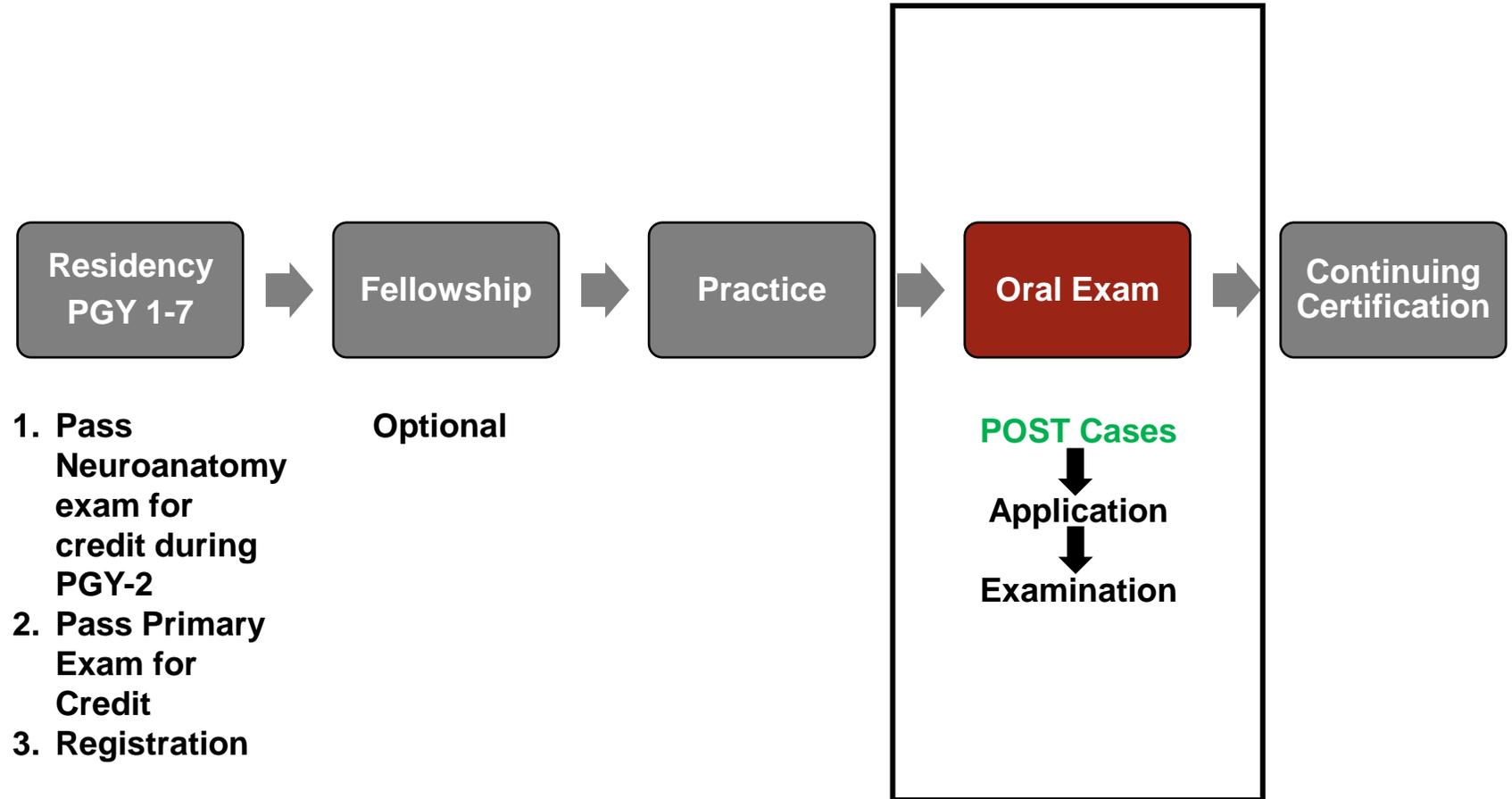
★ Once candidates have finished logging practice data they should submit it to the ABNS board and begin work on the application for oral examination and certification. The online application provides candidates with a centralized application portal where they can submit their application, upload supporting materials including the business associate agreement (link below), make credit card payment, request reference letters and check on the status of their application at any time. The new online system will streamline the application process and expedite ABNS credential committee review.

- [Application for oral examination and certification](#)

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ABNS POST

Pactice and
Outcomes of
Surgical
Therapies

Candidate entering cases since March 2018
Required number of consecutive cases is 125
Enter 10 cases within 6 months of training completion

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ABNS Post



Tony Asher



Elad Levy



Jack Knightly



ABNS POST

Pactice and Outcomes of Surgical Therapies



POST Case Entry

Mozilla Firefox

localhost:8443/acesis/KikaWv X +

https://localhost:8443/ace: Search Most Visited Prod Staging First Tech JIRA

Home POST CL-14 CL-6 IC-15

Validate Show Help
Discard Changes Extendable
Save Archive Case New Task Finalize
Close Close Anthony Asher

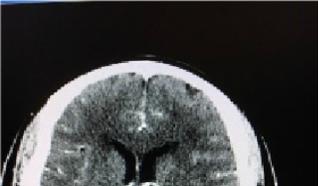
Entry ID: IC-15 Active? Tasks: In Progress Entry: In Progress

Title: Individual Case Owner: Anthony Asher Location: ABNS Edit Expand All More Functions

Provide up to 6 images (or 2 additional if dynamic images or long view scoliosis x-rays are obtained) that are most representative of the pathology that led to neurosurgical intervention. Multi-plane images (e.g., axial and sagittal for spinal disorders) preferred

Image 1 

Caption 1 Non contrast CT with small new hemorrhage. Edema noted

Image 2 

SWF 4.6.9242 Configuration

ABNS POST

Pactice and
Outcomes of
Surgical
Therapies



Data collected

- Candidate
- NPI number
- Training program
- Written boards scores
- Fellowship/Subspecialty
- Practice type
- Practice location
- Case (POST) content
- Oral boards results

ABNS POST

Pactice and
Outcomes of
Surgical
Therapies



Potential analytics

- **Diplomate demographic trends**
- **Training-related**
- **Quality-related**
- **Subspecialty-related**
- **Management improvement**
- **POST-related improvements**

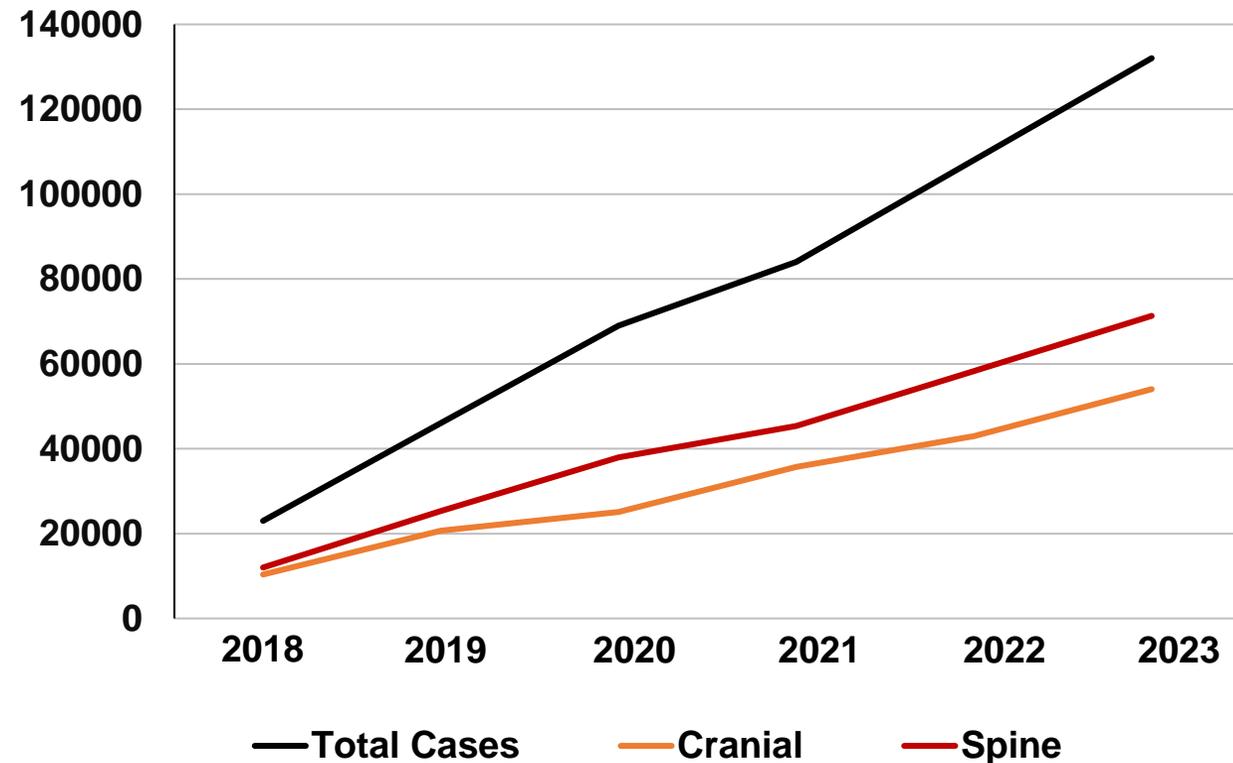
ABNS POST

Pactice and Outcomes of Surgical Therapies



Current status

- **82,534 Director-approved cases in POST**
 - 70,913 Adult cases (86%)
 - 11,621 Pediatric cases (14%)



ABNS POST

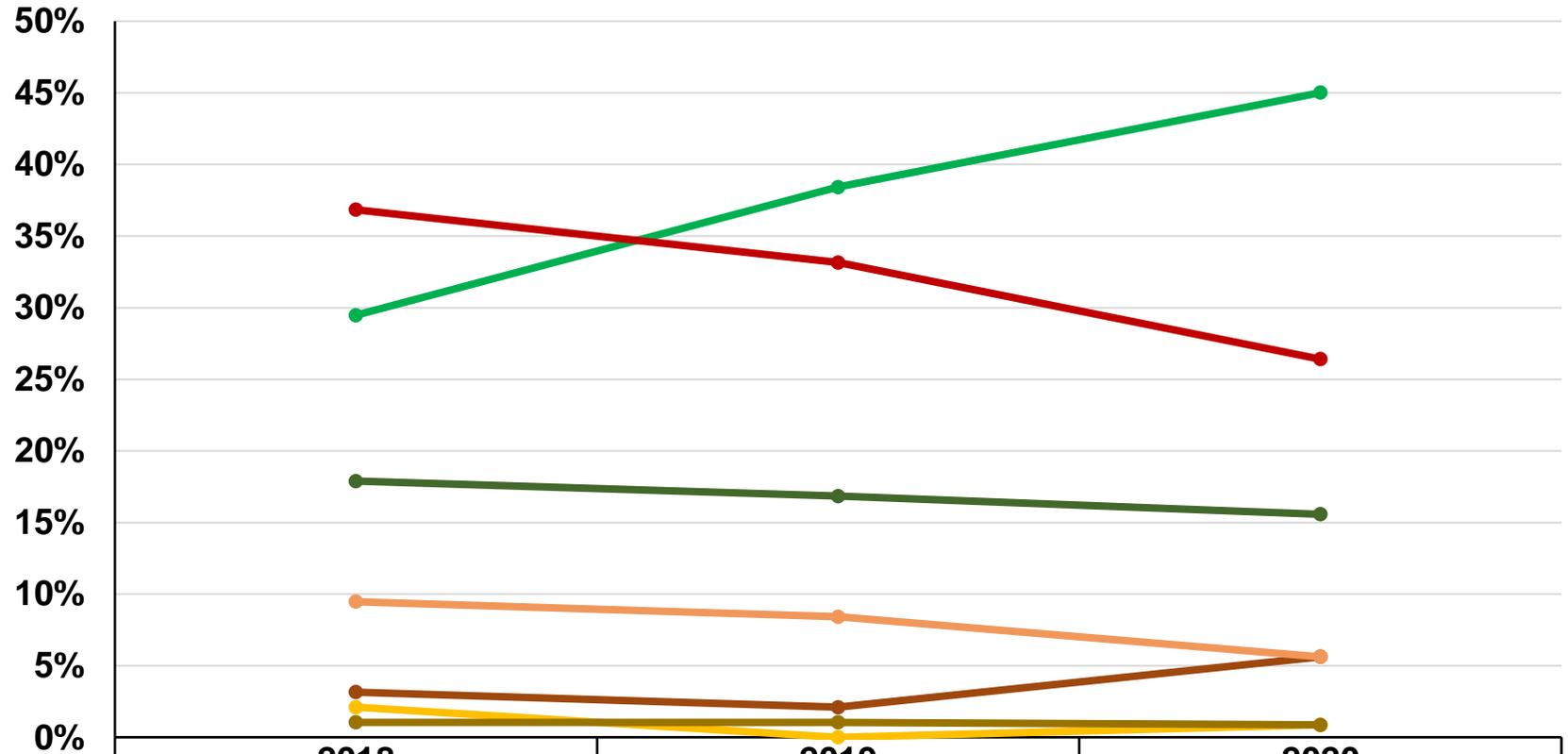
Pactice and Outcomes of Surgical Therapies



Current status

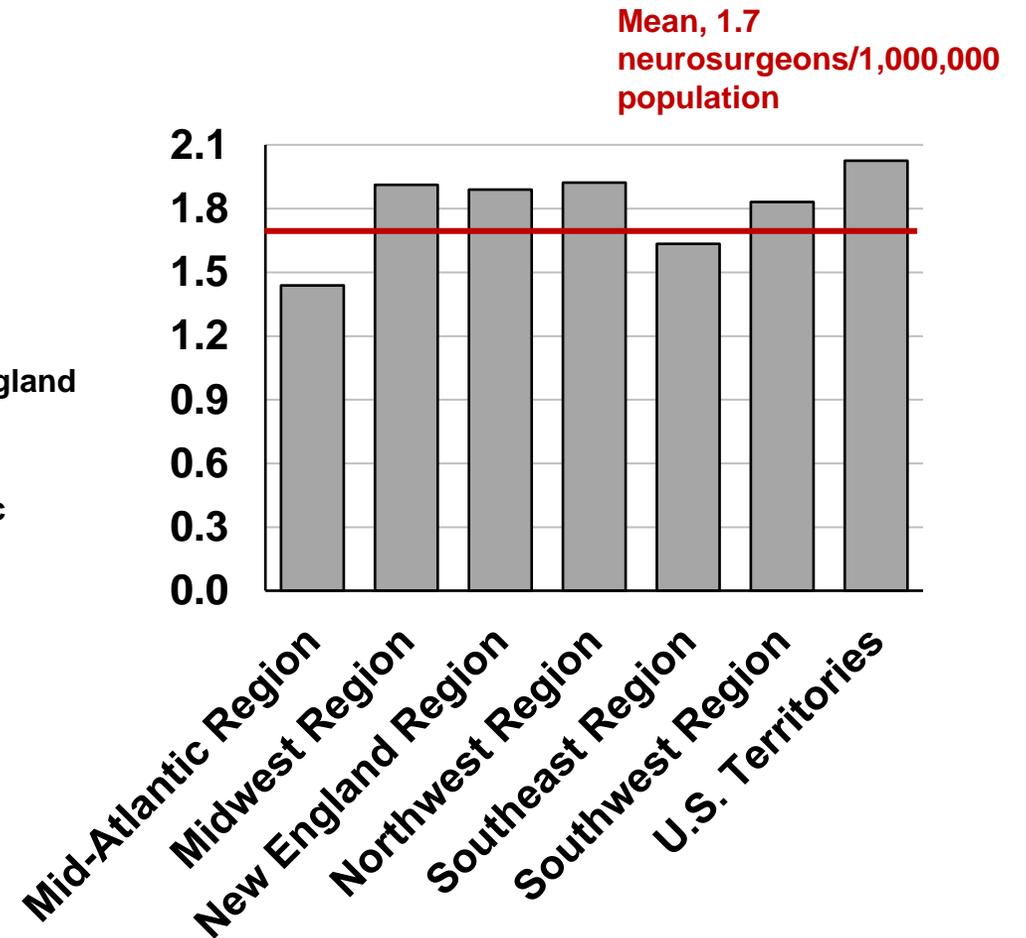
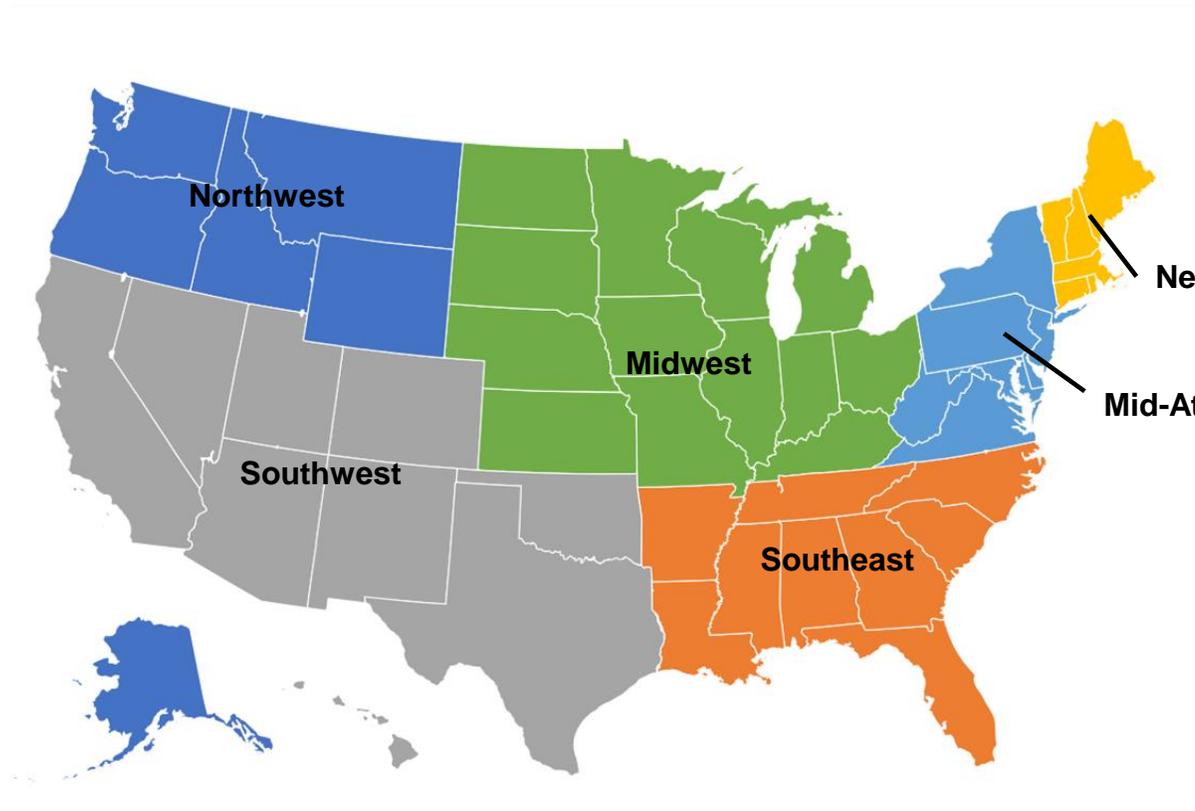
- **70,913 adult cases in POST**
 - 29,166 Cranial cases (41%)
 - 39,592 Spinal cases (56%)
 - 1,274 Peripheral nerve cases (2%)
 - 738 Other cases (1%)
- **11,621 pediatric cases in POST**
 - 9,118 Cranial cases (79%)
 - 2,320 Spinal cases (20%)
 - 135 Other cases (1%)
 - 48 Peripheral nerve cases (0.5%)

Candidate Practice

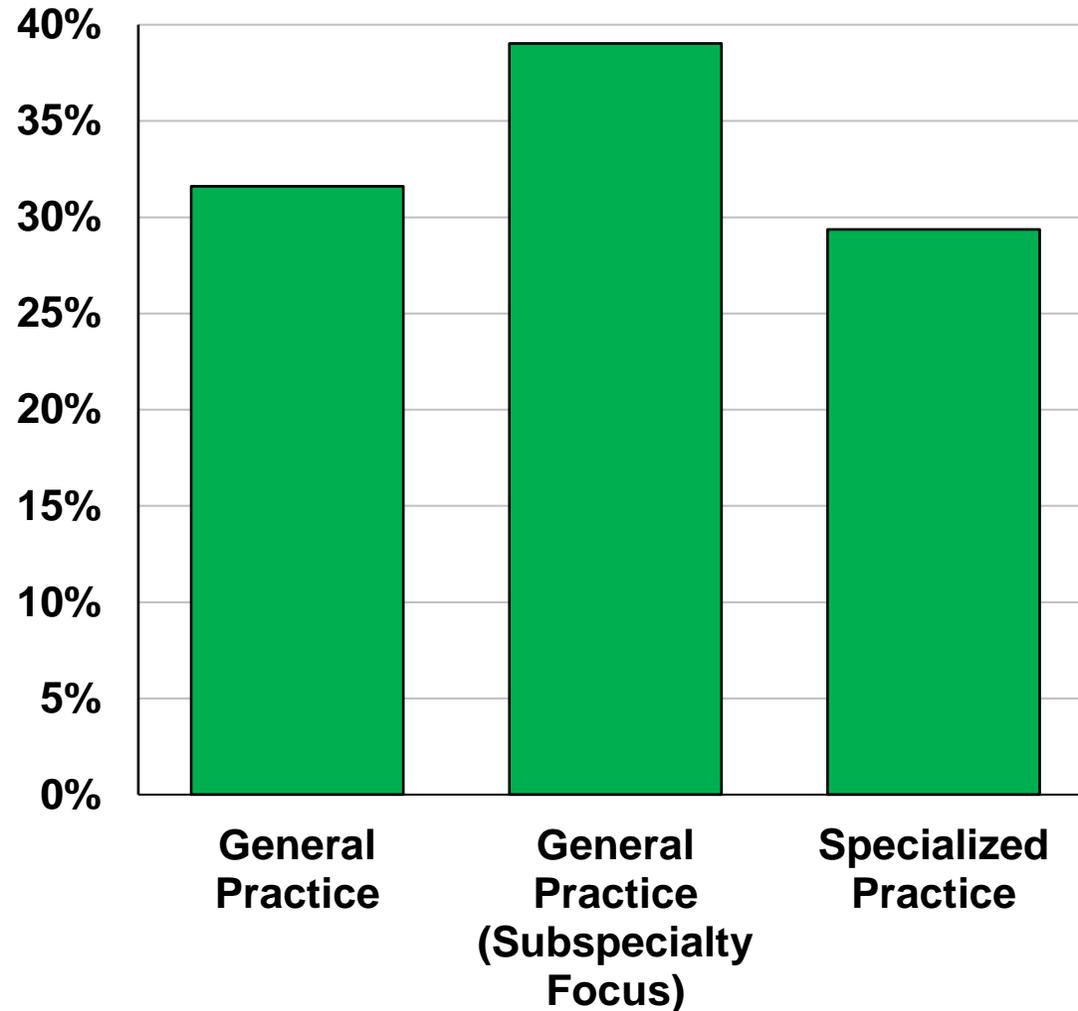


	2018	2019	2020
Full-time academic	29%	38%	45%
Government non-military	2%	0%	1%
Hospital employed	37%	33%	26%
Military	3%	2%	6%
Other	1%	1%	1%
Private practice- independent	18%	17%	16%
Private practice with academic affiliation	9%	8%	6%

Neurosurgeon Geographic Density



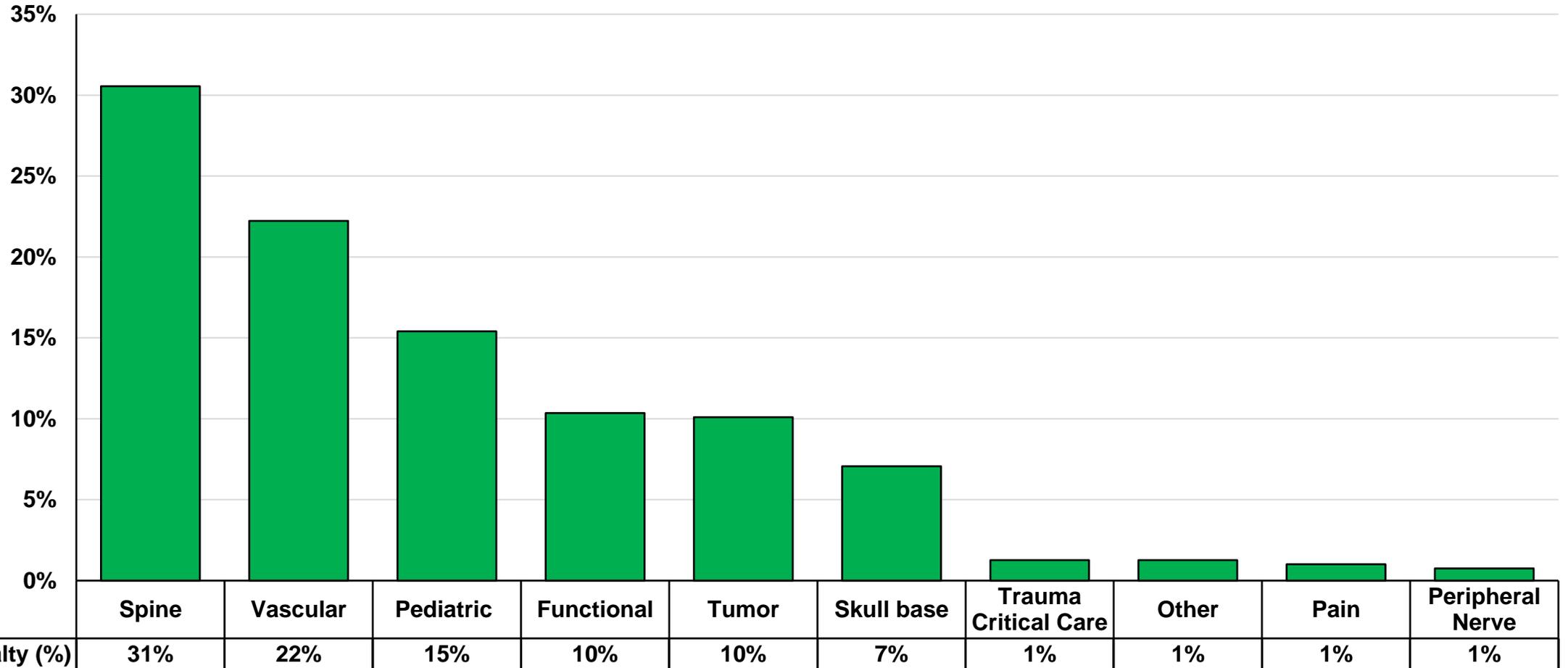
Practice Type



92% of neurosurgeons in “General Practice with Specialty Focus” or “Specialized Practice” completed a fellowship.

Of those that did not complete a fellowship (8%), included spine (48%), tumor (21%) or functional (21%).

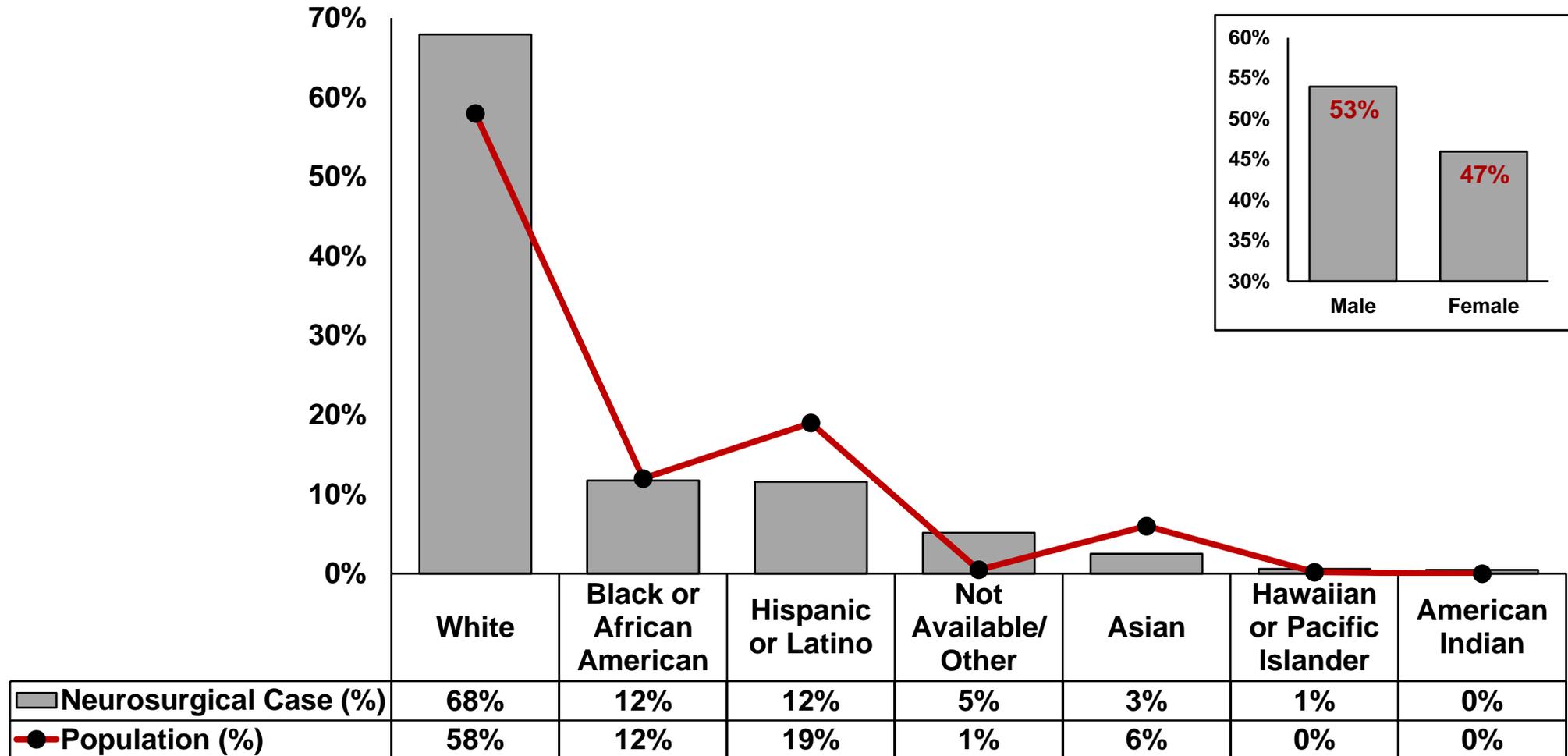
Subspecialty Type (those with fellowship)



Quality and Safety Grid (Adult and Pediatric)

Variable	Mean	Median	St. Dev.
Percent cases with reoperations	7.3%	6.2%	4.5%
Percent cases with complications	10.0%	8.1%	7.7%
Percent cases with deaths within 6 months	5.7%	4.7%	4.3%
Percent cases with objectives not met	2.7%	1.6%	3.0%
Percent cases lost to follow up	19.4%	16.9%	13.8%
Percent cases with concerns	5.6%	1.6%	8.5%
Percent cases with appropriateness concerns	1.5%	0.0%	3.1%
Percent cases with case management concerns	1.4%	0.0%	3.0%
Percent cases with coding concerns	0.8%	0.0%	2.9%
Percent cases with follow up concerns	1.3%	0.0%	4.1%
Percent cases with outcomes concerns	0.5%	0.0%	1.6%
Percent cases with safety concerns	0.2%	0.0%	0.7%
Percent cases with other concerns	0.4%	0.0%	1.5%

Patient Demographics



Training-related

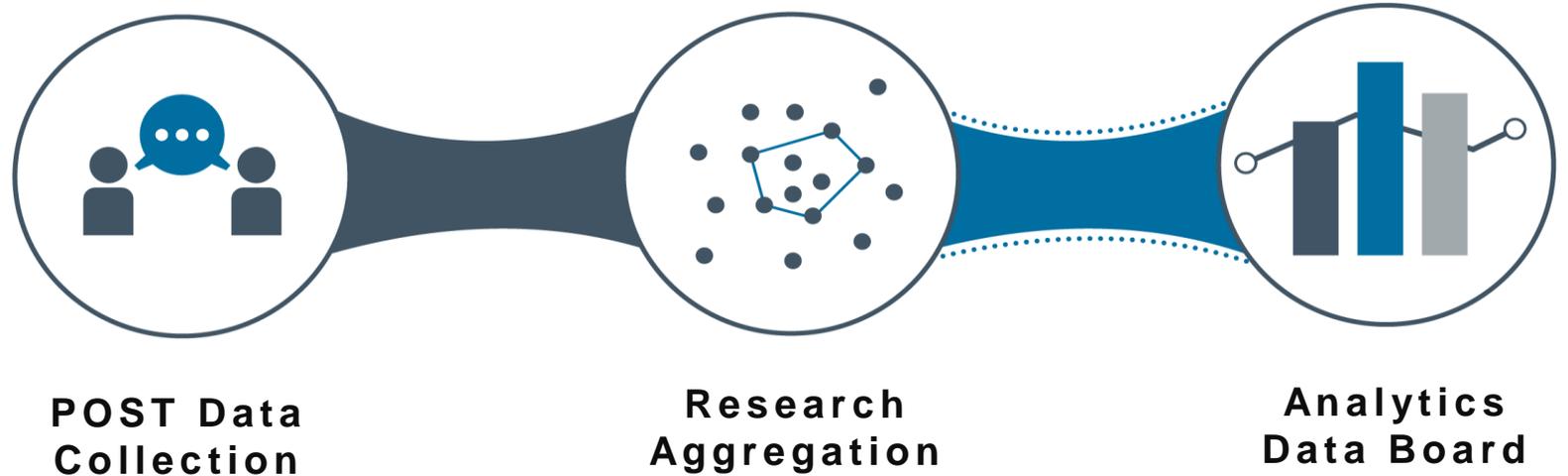
- **Assess effectiveness of training**
 - Define patterns related to training (surgical indications, coding errors, complication rates, oral board pass)
 - Match case logs with clinical and board outcome
- **Define factors associated with primary exam**
 - Does it provide useful correlation with outcomes or board certification



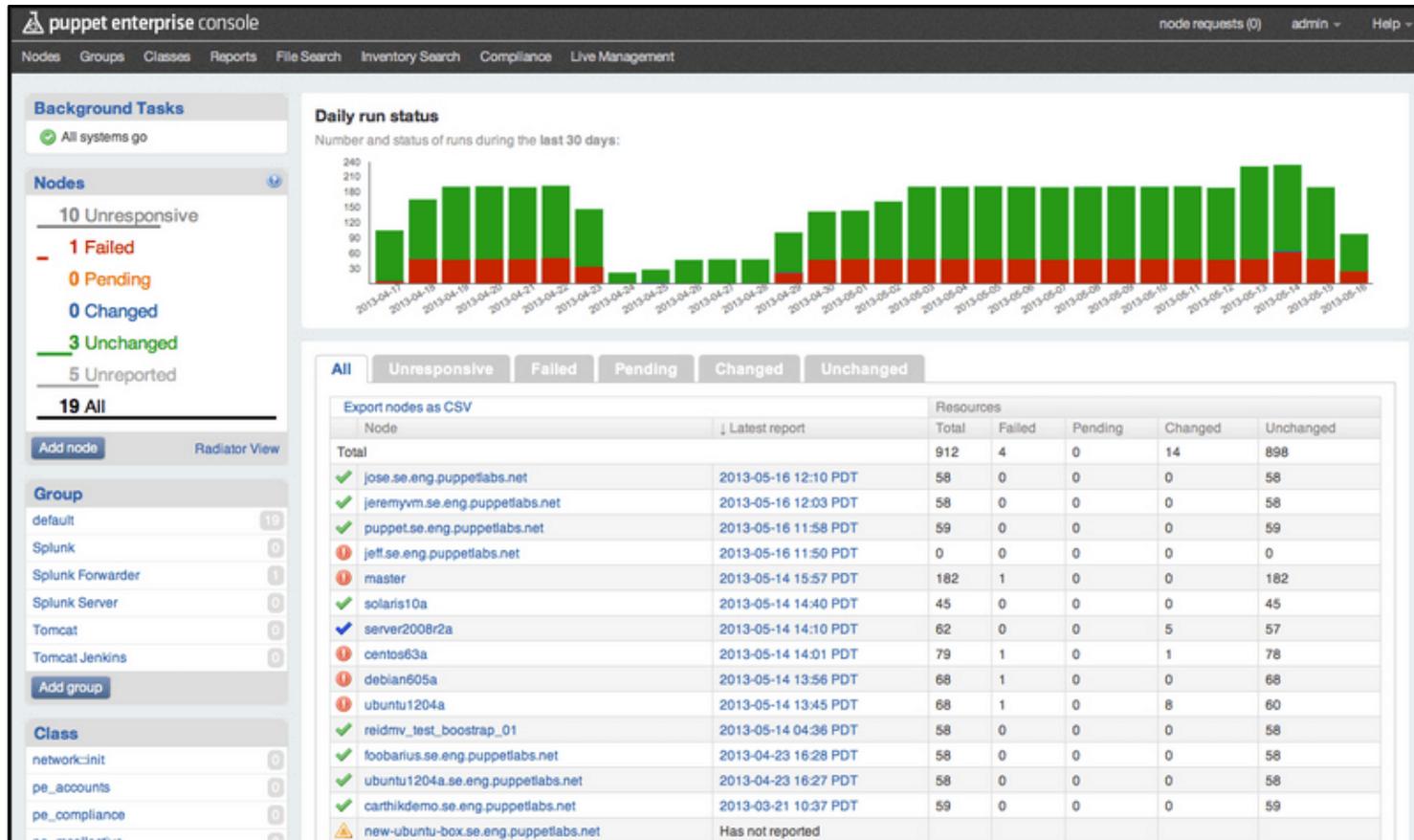
ABNS POST

Pactice and
Outcomes of
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Collection and analysis of data in real-time



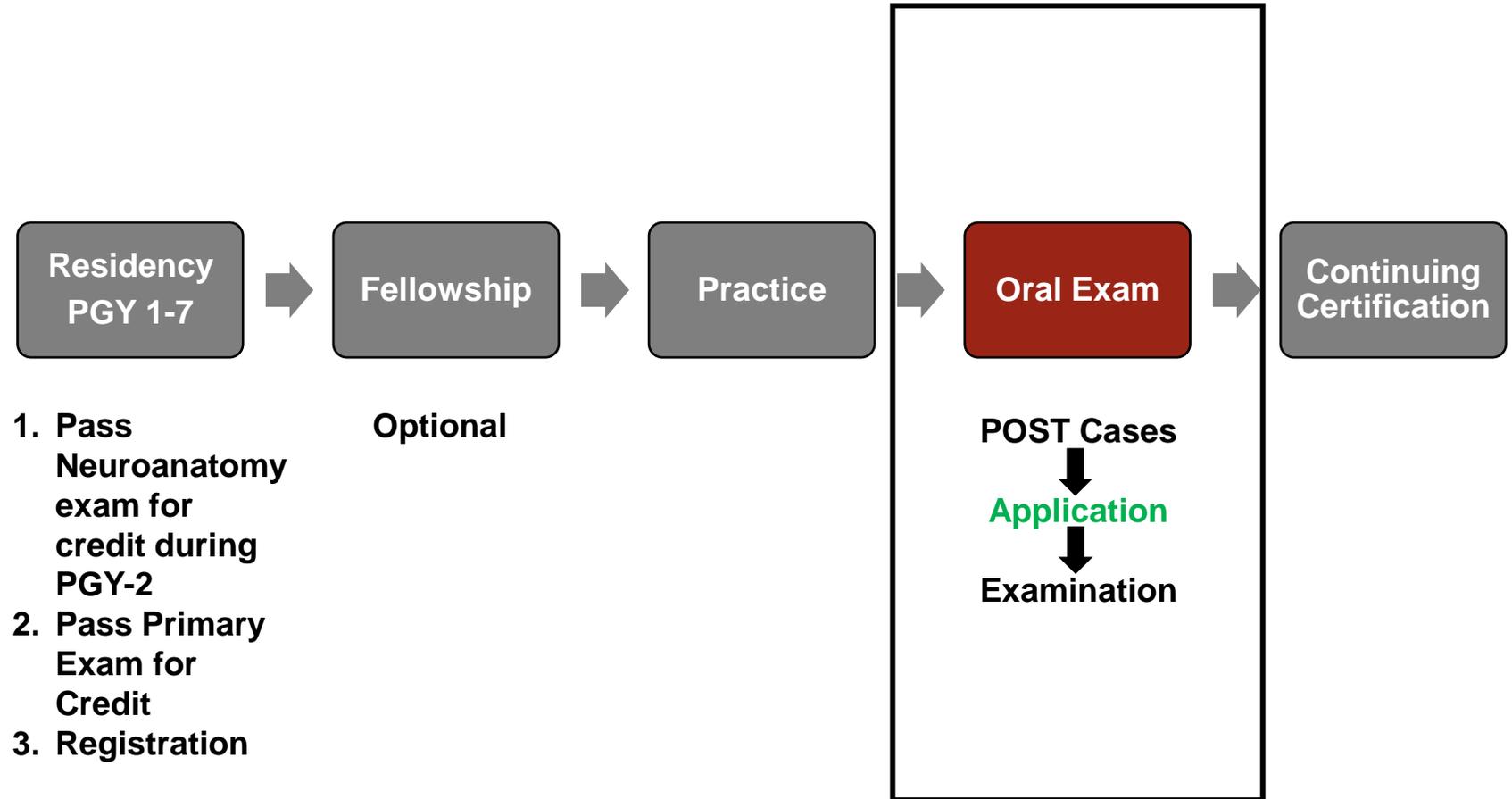
Residency Training Data Board



Data assessment

- NPI number
- Primary Exam
- Oral Exam
 - Passing rate
 - Failure subtypes
- Case Type
- Practice Demographics
 - Practice type
 - Subspeciality
- Complications, reoperations, objectives met, death (6 months) and unmet objectives
- Concern issues by reviewers
- ACGME training data (case mix and volume)
- Continuing certification data

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Preparing for Oral Boards



Application for oral exam

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<input type="checkbox"/> 2021	December 31, 2024

1. Completion of accredited training
2. Subspecialty (Fellowship) training
3. License in good standing
4. Practice references
5. Hospital credentialing and references

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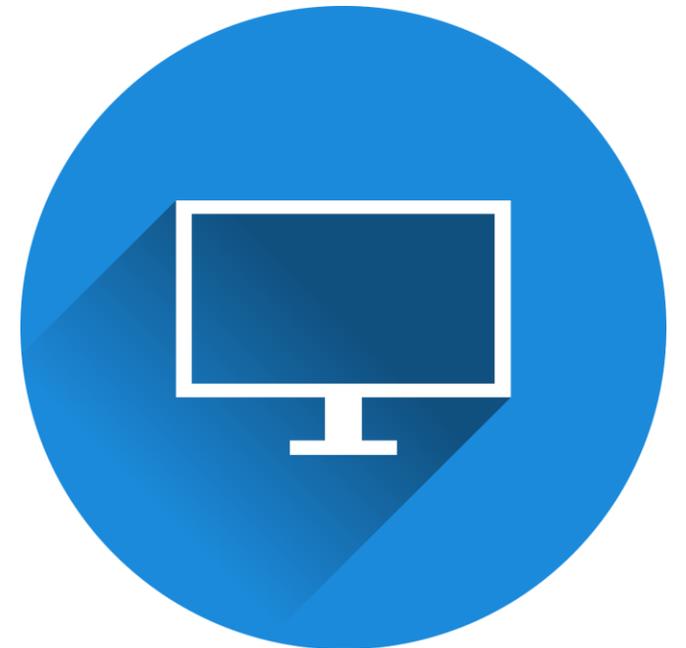
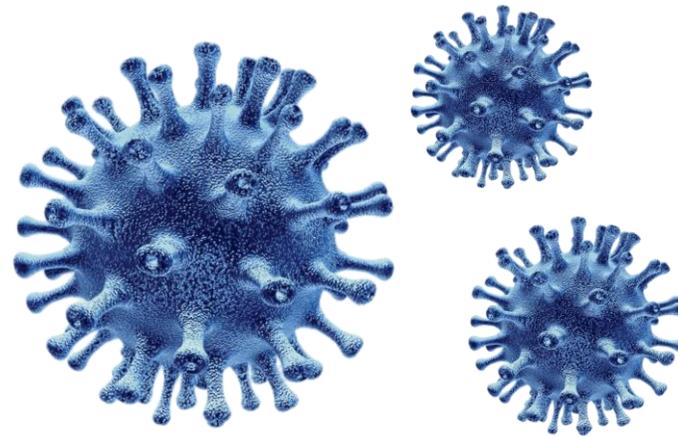
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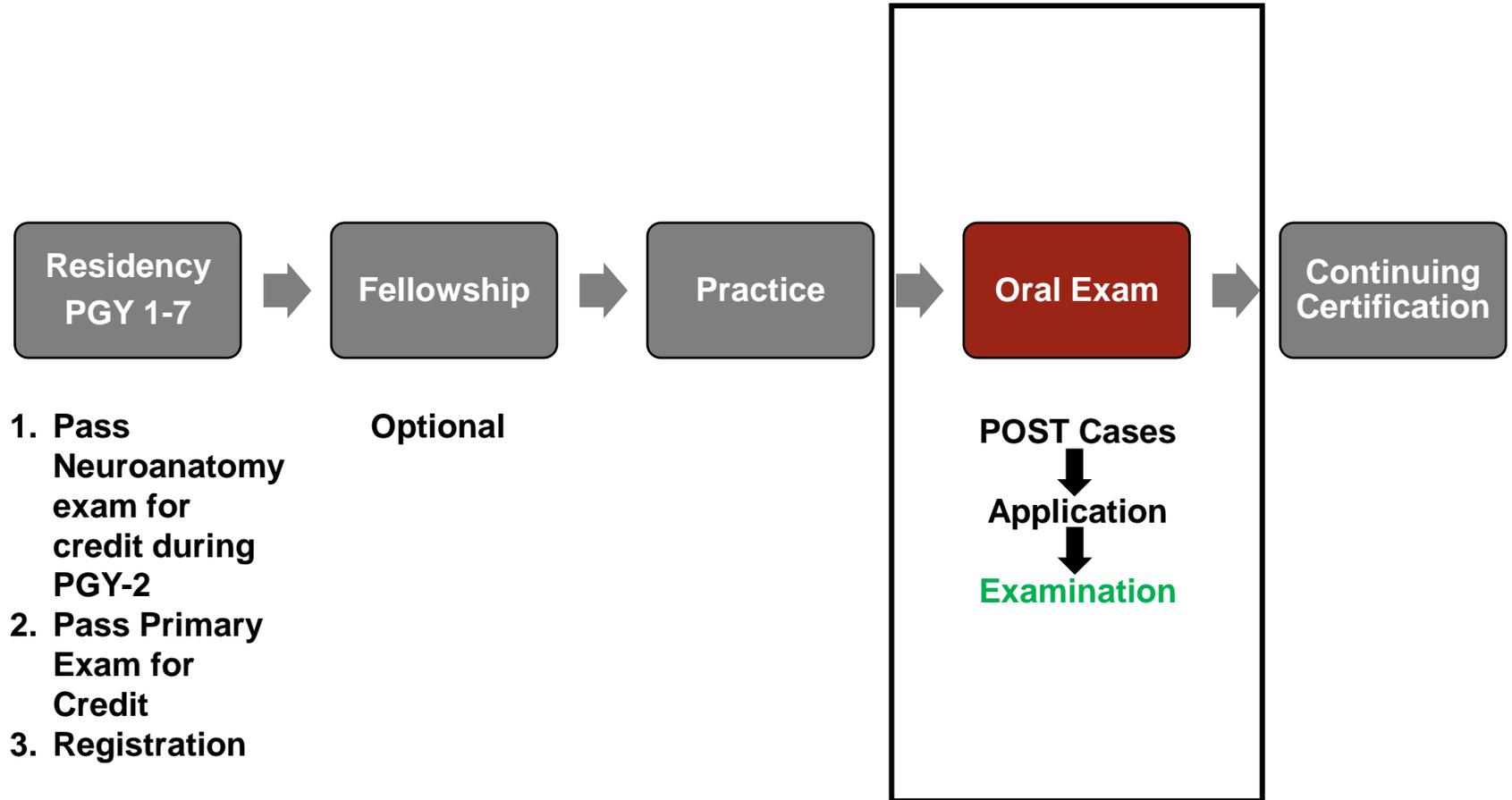
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Oral Examination

**Administered virtually
since May 6, 2020**



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Oral Examination

Oral Examination Format



 Measurement Research Associates a Division of Measurement Incorporated

The new exam format tailors the exam to candidates' chosen practice with the Focused session and the Case Reports session, while still testing the knowledge, skills, and abilities required for general practice in neurosurgery in the General Session. And, by standardizing the cases used in the General and Focused sessions, the ABNS has made the exam more uniform for candidates.

APA, NCME, 2014), “The level of performance required for passing a credentialing test should depend on the knowledge and skills necessary for credential-worthy performance in the occupation or profession and should not be adjusted to control the number or proportion of persons passing the test.”



Oral Examination

Oral Examination Format

Session 1 (5 cases)

General Neurosurgery

Session 2 (5 cases)

Focused Practice (Spine, Tumor, Vascular,
Functional, Trauma/Critical Care, Pediatric)
General Practice (General Neurosurgery 2)

Session 3 (5 cases)

Cases from POST (10 selected, 5 chosen)

**Each session is 45 minutes. No set order for
the sessions.**



Oral Examination

Candidate Cases

3. Applicant Case Questions

Grade	Case Name
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

Comments

Applicant Case Questions

4	Strong knowledge base, excellent indications for surgery, superior management of case and complications
3	Adequate knowledge base, satisfactory indications for surgery, supports care decisions, satisfactory management of case and complications
2	Weak knowledge base, marginal indications for surgery, care not supported, marginal management of case and complications
1	Insufficient knowledge base, poor indications for surgery, major safety or ethical/professional concerns, unacceptable management of case and complications

1. Typical cases.

2. Unclear indication for surgery.

3. Complications.

4. Unclear management paradigm.

5. Imaging doesn't justify surgery or care.

6. Coding concerns.

Components: Knowledge – Safety – **Surgical Indications** –
Care Decisions Supported – Case Management



Oral Examination

Oral Examination Fail Rate

- 2015 Spring 16.8%
- 2015 Fall 13.5%
- 2016 Spring 17.0%
- 2016 Fall 14.4%
- 2017 Spring 21.3%
- 2017 Fall 19.4%
- 2018 Spring 17.0%
- 2018 Fall 14.9%
- 2019 Spring 18.2%
- 2019 Fall 17.5%
- 2020 Fall 15.0%
- 2021 Spring 15.1%

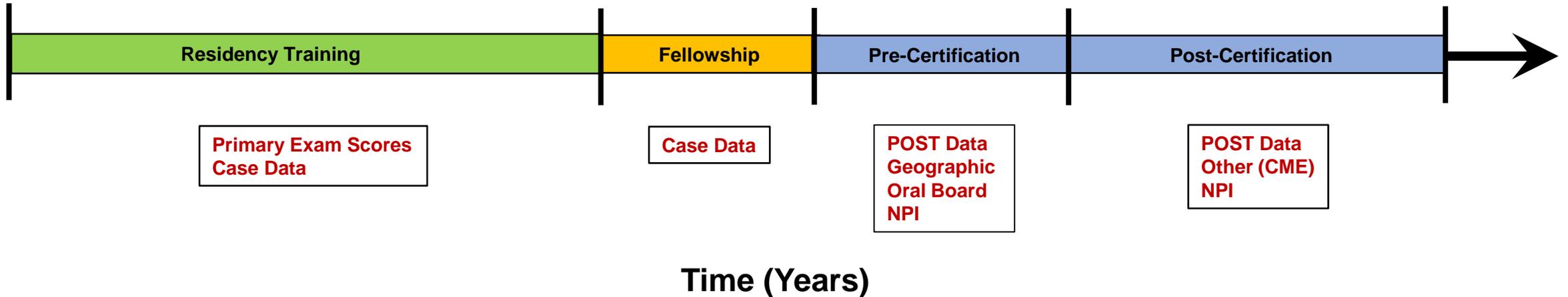
16.7%





The “Continuum”

Residency Training Programs
Fellowship Training Programs
Residency Review Committee
Congress of Neurological Surgeons
American Association of Neurological Surgeons
Society of Neurological Surgeons
CAST
ACGME



Conclusions

Certification Process

- **Critical elements process**
 - Relevance to applicant and public safety
 - Standardization of exam
 - Grading effectiveness/score normalization
 - Data analytics
- **Essential components during training**
 - All PGY-2 residents must pass the neuroanatomy examination by June 30 of that training year.
 - As of July 1, 2023 residents **MUST** pass the written examination for credit prior to Chief Resident training year.



Thank you!

