AOE Analysis of AANP’s Fall 2016 Membership Survey

A short survey was sent to the membership base of the American Association of Neuropathologists (AANP) in the fall of 2016 to gain a better understanding of current neuropathology practice characteristics and future topics for the annual meeting. A total of 115 members provided responses to the 31 questions within the survey and the summary of these results are described below.

The survey asked members to rate 23 different clinical assertion questions using a 5-point Likert-type scale from 1=Disagree Completely to 5=Agree Completely. These questions were developed to determine a member’s level of knowledge regarding four separate therapeutic topics in neuropathology.

Figure 1 provides the results for the five questions evaluating knowledge in the area of neoplastic diseases. The first four statements in Figure 1 are false while statement five is true. Members selected responses in the desired direction for all questions in this therapeutic area.

![Figure 1: Neoplastic Diseases](image)

**Figure 1**

- Assessment of PD-1 and PD-L1 requires flow cytometry and cannot be achieved in paraffin-embedded material. (False)
- A thalamic astrocytoma in a 4-year-old girl with no mitoses, necrosis, or complex microvasculature and a H3-K27M mutation is WHO grade II. (False)
- 67% of posterior fossa ependymomas harbor a fusion between C11ORF95 and RELA. (False)
- BRAF mutations are specific for circumscribed grade I and II tumors of childhood and should not be present in GBMs (False)
- A characteristic feature of papillary tumor of the pineal region is strong, diffuse positive staining for cytokeratins (CAM5.2, CK18, AE1/AE3) (True)

**Figure 2** provides the results for the five questions evaluating knowledge in the area of neurodegenerative diseases and age-associated brain changes. The first four statements in Figure 2 are false while the fifth statement is true. Only statements one and five had a mean score in the desired direction, and the statements with the mean score on the incorrect side of the scale indicate where additional education is appropriate, this includes:

- Frontotemporal dementia and parkinsonism linked to chromosome 17 (FTDP-17) is a 4-repeat tauopathy. (False statement, mean of 3.15)
- Aging-related tau astrogliopathy (ARTAG) is a spectrum of astrogial 3-repeat tau pathology typically with variable morphologies including thorn-shaped astrocytes and granular/fuzzy astrocytes. (False statement, mean of 3.38)
- Current neuropathologic evaluation guidelines for neurodegenerative conditions stress the importance of accurate clinical data for optimal neuropathologic diagnostic interpretation. (False statement, mean of 3.64)
Figure 3 provides the results for the two questions evaluating knowledge in the area of ethics. The first statement in Figure 3 is false while the second statement is true. Members selected responses in the desired direction for both questions in the area of ethics.

Figure 4 provides the results for the two questions evaluating knowledge in the area of changes in current healthcare practice. Both statements were true, however only statement two was answered in the desired direction. Statement one had a mean score in the neutral position which may indicate where additional education is appropriate:

- Groups who are first year Medicare participants, participants in eligible Alternative Payment Models (who qualify for bonus payment), and those below low volume threshold are NOT subject to the Merit-Based Incentive Payment System. (True statement, mean score of 3.03)
Figure 5 provides the results for the three questions evaluating knowledge in the area of accreditation and quality. The first statement in Figure 5 is false while the second and third statements are true. Members selected responses in the desired direction for all questions in the area of accreditation and quality.
Figure 6 provides the results for the five questions evaluating knowledge in the area of emerging technologies. Statements one, two and four are false while the third and fifth statements are true. Statement four had a mean score on the incorrect side of the scale, indicating where additional education may be of value:

- Optical coherence tomography can reveal tissue structure with micron level resolution and 1-2 cm penetration depth without the need for tissue removal. (False, mean of 3.5)

Members were also asked a few questions related to topics of interest for upcoming annual meetings. Figures 7-9 show the results of questions related to neuropathology teaching. Figure 7 indicates that members feel that the AAMC Med Ed Portal does contain some peer reviewed articles to support teaching.
The majority of members participate in undergraduate medical school teaching (Figure 8), however they feel that less than 10 hours of medical school curriculum is dedicated to neuropathology (Figure 9).
Members were also asked to indicate their level of interest in attending a CME-certified microscope and didactic tutorials workshop. Just over half of respondents indicated that they would be very or somewhat interested (Figure 10).

![Figure 10](image)

Self-assessment modules (SAMs) are provided through AANP and members were asked to rate their ability to meet their educational needs. Just over 40% strongly agreed or agreed that the SAMs are able to meet their needs (Figure 11).

![Figure 11](image)
To further understand the benefit or challenges with the SAMs provided by AANP, members were asked to provide a free text response to their answer choice. Responses included:

- Dislike using On-Line tools and materials (age 65)
- Do not know about the self-assessment modules
- Do not use (x9)
- Don’t need them (x4)
- general pathologist seeking any valuable neuropathology education resources
- I am exempted from re-certification.
- I do not use these modules, but rely upon the CAP Neuropathology CME/SAM Program as the cost for CAP registration is borne by my hospital laboratory.
- I don't need SAMs yet as I am still in training.
- I don't use the AANP SAMS and I am not participating in MOC (life-time certification). I far exceed CME requirements for licensure renewal and for hospital privilege maintenance, I read the literature extensively, and I do the CME post-tests etc. after meetings.
- I greatly appreciate the availability of SAMS through the AANP
- I have not used SAM's yet, but intend to use them in the future, so I don't know how useful they are yet.
- I have not yet used the self-assessment modules but will probably start soon
- I just read newly published NP textbooks instead.
- I like the quiz after the AANP meetings. Not sure if these are what you call the self-assessment modules.
- I use mainly textbooks and articles
- Not helpful if unable to attend the meeting
- Reference text/ material for the course is not always easily available (especially those discussed at meetings with 2 handouts provided)
- Retired
- Seem to be very detail oriented and not conceptual or helpful for practice.
- The more SAMs, the better
- The questions related to American health system are relevant for me.
- They are reasonably priced and great learning experiences.

The final set of questions asked members to discuss their use of the *Journal of Neuropathology and Experimental Neurology (JNEN)*. The majority of members read JNEN monthly (Figure 12) and online (Figure 13).
Members ranked case reports as the most valuable resource in the JNEN, while translational science ranked lowest (Figure 14). The final question asked members to provide information on what they liked most and least about JNEN. Responses included:

- A good source of reliable reference.
- A lot is not practical for surgical neuropathology
- App from previous publisher was excellent. Too much basic science that is of limited use for the practicing neuropathologist.
- Good review articles
• I don't look at the journal often enough to be able to answer this question. I should make more of an effort to read it and will try in the future.
• I find it very useful to hear about the recent scientific results
• I like that it is a very reputable journal and am proud to have it as our official journal. The review papers and autobiographies are very useful. As a clinical practitioner, I would like to see a component of publications with more practical clinical influence.
• I like that JNEN keeps me up to date.
• I like the diversity - the journal runs a broad scope across areas of neuropathology, so this is good to bring me out of my field of expertise.
• I like the reviews but most of the papers that I look at are clinical research/case reports. I wish I had more time to read the reviews though. They are good.
• I think it is an excellent journal. It covers a broad spectrum of neuropathological areas, it combines translational and occasional basic science articles with more clinically oriented articles, and some of the review articles are very helpful. The quality of the illustrations remains mostly good. The Editor does a good job in keeping the journal quality high.
• I used to be a subscriber of JNEN for print version years ago. I was accepted as an active member in July 2016. So I don't have a solid information about like and not likes of the Journal. I hope I will have the opportunity to make an interpretation about the Journal in the months to come.
• I would prefer it to more clinically oriented because of the nature of my practice
• International scope of contributors; the connection to AANP events, history and members.
• It is not terribly focused on practical clinical issues. That has always been its gestalt. Many of the major clinical articles used in practice are found elsewhere.
• Like papers related to new developments in diagnostic neuropathology.
• Like: high editorial and publishing standards. Dislike: some articles are overly focused on basic science or esoteric aspects of neuropathology not necessarily applicable to the broad scope of general practice.
• Need to publish more high impact clinically-relevant translational studies
• Preoccupation with dementia is excessive, particularly given the staggering imbalance between investment and discovery
• Should be available free to senior members without institutional affiliation
• The basic science stuff is of no interest to me
• Too many missions, not my go to for keeping up to date; not my go to for publishing
• Useless stuff usually
• Would like better quality images.
• Would like regular updates/recommendations on clinical practice changes that would be beneficial to patient care
• Would prefer more didactics, like the Brain Pathology "Case of the Month."

Conclusion:
Areas of need for additional education were revealed in the 2016 Membership Survey. Additionally, members provided insightful responses to teaching in medical schools, need for CME and SAMs and current pros and cons of JNEN.