ASCP FELLOWSHIP & JOB MARKET SURVEYS
A REPORT ON THE 2016 RISE, FISE, FISHE, NPSE, PSE AND TMSE SURVEYS
INTRODUCTION

ASCP responds to the interests and needs of residents, fellows, and program directors by directing an annual survey on fellowships and the job market for pathologists in training, including both residents and fellows.

The surveys are conducted as part of the Resident In-Service Examination (RISE), and the Fellow Forensic In-Service Examination (FISE), the Fellow In-Service Hematopathology Examination (FISHE), Fellow Neuropathology In-Service Examination (NPISE), Fellow Pediatric Pathology In-Service Examination (PISE), and the Fellow Transfusion Medicine In-Service Examination (TMISE). These data are compiled by ASCP to provide information useful to all pathology trainees, residency and fellowship program directors, and prospective employers.

A total of 2478 residents participated in the Spring 2016 RISE and survey in the following training levels: 679 PGY-1, 641 PGY-2, 631 PGY-3, and 527 PGY-4.

Of the following residents, 85 percent are in AP/CP training, while 11 percent and 4 percent are in AP only and CP only tracks respectively. For PGY 1-4 trainees, 56 percent have U.S. Medical Degrees.

A total of 305 fellows participated in the five Spring 2016 Fellowship In-Service Examinations.
As part of the 2016 RISE, 1158 PGY-3/4 residents were surveyed about their experience in the fellowship process and residents' attitudes toward fellowship training.

From the 2016 survey, the fellowships that PGY-3/4 residents have already applied for or intend to apply for are listed in order of preference:
Current Interest in Applying for a Fellowship (PGY-3/4 residents only)

- I have accepted a fellowship this year
- I have applied for a fellowship this year
- I intend to apply for a fellowship this year
- I do not intend to apply for a fellowship this year

83%
6%
6%
5%

Principal Reason for Pursuing a Fellowship (All residents)

Residents cited three factors equally in affecting their decision to pursue a fellowship: enhancement of their pathology skills, fulfilling a requirement for a desired position, and enhancing the ability to secure employment. Somewhat less frequently, residents cited that the desired job opening was not available at the time of residency ending.

Number of Fellowships Intended to Complete (All residents)

About half of the residents plan to complete one fellowship, and just under half report interest in training in two fellowships. A small minority do not plan to do a fellowship or plan to complete more than two fellowships.
For what reason(s) are you interested in completing multiple fellowships? (PGY-3/4 residents only)

To how many fellowship programs did you formally apply? (PGY-3/4 residents only)

42% of the residents applied to 1-3 fellowship programs and about half applied to 4 or more fellowship programs. A significant number (17%) applied for more than 10 fellowships.

Number of Fellowship Interviews Received (PGY-3/4 residents only)

2/3 of residents have 3 or fewer interviews for fellowships. Only a small number of residents interview for seven or more fellowship positions.
Number of fellowship Offers Received  (PGY-3/4 residents only)

The reported results for fellowship offers in 2016 were remarkably similar to previous years. Slightly more than half of residents received a single fellowship offer; only 8 percent of PGY-3/4 had not received any offers at time of survey. Almost 40 percent of residents had positive responses from two or more fellowship programs, suggesting that there is competition among fellowship programs for strong applicants.

In what PGY-year did you finalize your choice of fellowship? (All residents)

In what PGY-year did you finalize your choice of fellowship? (All residents)
Conclusions

Fellowship training in pathology is planned by 95 percent of residents. 45 percent choose to pursue two or more fellowships to obtain specialized training in multiple areas, in order to meet their career goals and to compete in the job market.

- As in previous years, decisions on fellowship specialties were mostly made during the PGY-2 and PGY-3 training years.

- Just over half of PGY-3/4 residents received only a single fellowship offer; almost 40 percent received multiple offers. Only 3 percent of PGY-4 residents had not yet received a fellowship offer, suggesting that only a small number of residents are not finding fellowship opportunities. A PGY-3 resident would still have another year to find a position.

- Surgical / Anatomic pathology is the top fellowship choice; cytopathology, hematopathology, GI/hepatic pathology, and dermatopathology round out the top five fellowship specialties.
PREPARATION FOR RESIDENCY AND FOR INDEPENDENT WORK

The ASCP Resident Council responded to requests from residents interested in learning about national trends regarding medical education prior to residency and differences in sign-out procedure.

How well did your medical school training prepare you for your pathology residency? (All residents)

Medical school preparation for pathology residency training is problematic with 48 percent of residents citing no exposure to pathology and/or no first-hand pathology experience during medical school. Less than 20 percent of residents felt that their medical school education prepared them adequately for pathology residency training.

- 19% Was not exposed to pathology as a career and/or did not know what pathology training entailed
- 35% Was exposed to pathology through labs and lectures, but had no first-hand experience
- 33% Had some first-hand experience and training, but still did not feel prepared for residency
- 13% Had adequate experience and education and felt prepared for residency

Do you believe that your sign-out experience would benefit from: (All residents)

As in most years, about half of residents would like more preview time.

- 46% More preview time
- 52% Less preview time
- 2% No Change
What type of sign-out experience does your program have? (All residents)

About half of the programs have morning or day-of preview time, and slightly less than half have overnight preview time. Six percent indicated combinations of sign-out format, depending on service or hospital for specific rotations.

Do you anticipate feeling ready to sign-out general pathology cases upon graduation from residency? (PGY-3/4 residents only)

49% of PGY-4 residents are ready to sign-out knowing that colleagues are available for back-up, but 38% are not ready or need a transition period.

Why don’t you anticipate feeling ready to sign-out cases upon graduation from residency? (PGY-3/4 residents only)

Most PGY-3/4 residents think that a fellowship is needed for confidence in signing out cases independently. 17% of PGY-3/4 residents felt there was a deficiency in their training, and about 10% felt that they needed more graduated sign-out.
Conclusions

- Pathology residents overwhelmingly felt that their medical school education had not adequately prepared them for their pathology residency, with only 19% stating that they had adequate experience and education.

- Nearly all residents have overnight or morning/day-of preview time, and about half would benefit from more preview time while the other half felt that they have an appropriate amount of preview time.

- Other than completing their planned fellowships, help for residents identifying their knowledge gaps, and embracing graduated responsibility are readily available changes that pathology programs could use to enhance resident confidence in their general pathology skills.

One-quarter of residents consistently note that there is no form of graduated sign-out during their residency; 78 percent of such residents would like graduated sign-out to be instituted.
Although relatively few pathology residents opt to go directly from training into the job market, both the ASCP Resident Council and the RISE Committee thought it would be useful to report relevant information for future trainees.

**Number of Formal Job Applications (PGY-3/4 residents)**

In 2016, only 18 PGY-3/4 residents formally applied for jobs.

**Number of Job Offers (PGY-3/4 Formally Applied)**

Of the 10 PGY-4 residents who formally applied for jobs, 9 of 10 received job offers, half receiving one offer. Also, 7 of 8 PGY-3 residents received job offers.
Helpful Employment Resources (PGY-3/4 residents only)

Residents learned of jobs through a variety of venues, but hearing of jobs from faculty and by word-of-mouth is always the most important resource for the job search. The next-most important resource was contacting potential employers directly. A variety of online resources were used to a lesser extent.

In learning of job opportunities please rate the following sources in terms of their importance to you (PGY-3/4 residents only)

Salary Range for Residents Who Accepted a Job Offer Directly After Residency Training (PGY-3/4 residents only)
Residents who chose to take a job immediately after residency were asked to rank factors in their job choice. Long-term job security, followed by geographic location were at the top of the list, while family factors were close behind as next-most important.

**Conclusions**

- Only 18 PGY-3/4 residents formally applied for a job starting immediately after residency. In 2016, 9 of the 10 PGY-4 residents seeking an immediate job received a job offer.
What type of practice environment do you plan to seek or are currently seeking? (PGY 1–3 vs. PGY-4)

Interestingly, PGY-1, PGY-2, and PGY-3 trainees consistently ranked academic positions as their preference by a margin of >10 percent over community practice and other options, but of the PGY-4 residents who listed a preference, the difference between the number choosing academic and community positions were slightly smaller.

How confident are you about finding the pathology job you desire? (All residents)

69% of trainees at all levels are somewhat to very confident that they can find their desired pathology job position, leaving a large number of residents lacking confidence about obtaining a job.

Do you feel prepared for the “business aspects” of pathology? (PGY-4 residents)

Very few senior residents have a high comfort level with pathology business/management. 62% have some level of confidence with the business aspect of pathology leaving 38% lacking confidence. Yet, about a third of graduating PGY-4 residents seek positions within community group practice, a setting where such skills are especially important for success.
What was/is your general range of student loans when you exited medical school? (All residents)

Has or will your amount of student debt influence your job choice? (All residents)

Student Loans
About 43 percent of pathology residents have no student loans at the time of medical school graduation. About 39 percent have more than $150,000 in debt, and 30% of all residents have $200,000 or more in debt. For residents who had student loans, about half felt that debt would affect their choice of practice setting and/or subspecialty.
Given the current economic/political environment, what is your general feeling about the future of the healthcare system in United States? (All residents)

[Bar chart showing percentages of residents' feelings about the future of the healthcare system in the US.]

Also considering the current economic/political situation, what is your general feeling regarding future compensation for those practicing pathology in the United States? (All residents)

[Bar chart showing percentages of residents' feelings about future compensation for pathology in the US.]

Resident Feelings About U.S. Healthcare in General
Of the residents surveyed who plan to live and practice in the United States, there was a slight increase in optimism about healthcare overall compared to 2015; however, 57% of those residents overall are pessimistic about pathology practice compensation in the future. Programs might consider addressing the morale of residents and assessing their knowledge of true job market data in the context of jobs on medicine and outside of medicine.
How do you feel resident education is prioritized at your program? (PGY-3/4 residents)

In response to questions about the importance of resident education at their institution, 42 percent indicated that education was a high priority. About 46 percent indicated some room for improvement, with only 10 percent stating education had a low priority, and a small minority claimed to be "self-taught." These results highlight some positive aspects about strong training programs, but suggest that most programs can improve in some regards, and a few might have significant work to meet the standard expected.

Was there a large discrepancy between AP and CP educational experiences? (Select all that apply, PGY-3/4 residents)

Many residents indicated that their AP and CP educational experiences were similar, but a number of residents indicated that AP was emphasized and had a better curriculum.
How comfortable are you expressing your fellowship/career plans? (All residents)

The vast majority of residents (almost 85 percent) were comfortable or fairly comfortable expressing their career plans, while only 3 percent were fairly or extremely uncomfortable expressing their plans.

How is the RISE score used in your institution? (Select all that apply):

The vast majority of institutions use RISE scores for individual and program education and improvement, consistent with the intentions of the exam development committee. Only a small minority are perceived by residents to provide honors or priority in positions based on scores.
What do you feel would have enhanced your educational experience? (Select all that apply):

When asked about possible enhancements to the training programs, factors at the top of the list include less time spent grossing, improved quality of didactics, and more time with enthusiastic faculty. Multiple options were not chosen as frequently by residents such as access to books, case load, and research time, so these areas are not high concerns for most residents.

Conclusions

- Very few residents are seriously considering jobs right out of pathology training. Of the PGY-4 residents seeking immediate jobs, 9 of 10 received offers.
- Although about a third of the residents are clearly interested in community practice, residency training in the business and management aspects of practice remains an area where improvement is needed.
- Medical school debt is significant for many residents and appears to play a role in their choice of practice and a subspecialty of pathology practice.
ASCP offered five Fellowship in-service examinations for the Spring of 2016: the Fellow Forensic In-Service Examination (FISE), the Fellow In-Service Hematopathology Examination (FISHE), the Fellow Neuropathology In-Service Examination (NPISE), the Fellow Pediatric Pathology In-Service Examination (PISE), and the Fellow Transfusion Medicine In-Service Examination (TMISE).

Fellow in-service examinations were taken by 305 individuals: post-exam surveys offered the chance to query fellows in Forensics (n=49), Hematopathology (n=138), Neuropathology (n=45), Pediatric Pathology (n=21), and Transfusion Medicine (n=52) about their experience entering the job market and any plans for additional specialty training.

Which of the following best describes your residency training program?

56% of all fellows surveyed are currently in university public hospital training programs, with approximately a quarter in university private hospital settings: the remainder is split between community, military, and other settings. About 60-80% of fellows responding to the survey received medical training in the United States, depending on specialty.
Did you receive your medical degree in the United States?

![Bar Chart: Medical Degree in the United States by Specialty]

Indicate your residency training track.

The vast majority of fellows in Forensics, Hematopathology, and Pediatric Pathology came from a background of AP/CP residency training. In contrast, 56 percent of Neuropathology and 36 percent of Transfusion Medicine fellows completed their residency training in AP-only and CP-only tracks, respectively.

![Bar Chart: Residency Training Track by Specialty]

Are you a diplomate of the American Board of Pathology (ABP)?

More than 75% of surveyed fellows are already diplomates of the American Board of Pathology.

![Bar Chart: Diplomate ABP by Specialty]
In which areas are you a diplomate of the ABP (Select all that apply)?

The majority of fellows are certified in AP/CP. Between 26 to 29 percent of forensics and neuropathology fellows are certified in AP only, while 36 percent of transfusion medicine fellows are boarded only in CP.

ADDITIONAL SUBSPECIALTY FELLOWSHIPS

We asked current fellows the following:

“Are you going to do an additional fellowship in a subspecialty other than your current fellowship?”

86 percent of forensic pathology fellows will only complete one fellowship. Between 40-76 percent of fellows in other subspecialities are planning to complete a second fellowship. Very few are planning more than two fellowships.
Indicate your principal reason for pursuing fellowship training

Fellows from all five subspecialities indicate that fellowship training improves employability and enhances pathology skills needed for a specialty that may cross training fields. Competition in the job market was another important motivator.

Are you going to do an additional fellowship in a subspecialty after your current fellowship pathology training?

About 23 percent of fellows had completed another fellowship at time of the survey, almost 36 percent of those in surgical or cytopathology. Another 72 percent have indicated that they were going to pursue an additional fellowship.

For what reason(s) are you interested in completing multiple fellowships?
How many job offers did you receive?

In 2016, at the time of the survey, 4/16 of pediatric pathology, 25/37 neuropathology, 16/45 transfusion medicine, and 50/124 hematopathology fellows did not receive job offers. It should be noted neuropathology is a two-year program. In contrast, all but 7 of the 48 forensic pathology fellows received offers. Although some fellows in each subspecialty received multiple offers, for each category the majority received only one offer.

For how many jobs did you formally apply (CVs/resumes mailed)?

The number of job applications varies widely by specialty. 69% of Forensic Pathology fellows applied for 1-3 jobs. In contrast, 37% of the Hematopathology and 33% of the Transfusion Medicine fellows applied for 7 or more jobs.

For how many jobs did you formally interview?

Most fellows interviewed for up to 3 positions.

How many job offers did you receive?
Has it taken you longer to find a job than you expected?

Did you receive a formal job offer within one year of formally applying for a job?

From the time you applied, how long did it take you to receive a firm job offer?

The majority of fellows who did find jobs received a job offer within 3 months of formal applications, but a smaller percentage of fellows took six months to greater than a year to find a job.

Did you receive a job offer at your own residency or fellowship training program?

- Yes, but declined for another offer
- Yes, accepted but will keep looking in the future
- Yes, accepted and plan to stay
- No, not offered
In 2016, a significant number of fellows had not yet received job offers at the time of the survey. Although some fellows in each subspecialty received multiple offers, for each subspecialty the majority received only one offer. Of those who received job offers, most received a job offer within 6 months or less from time of application.

From the time you applied, how long have you been looking for a job?

Did you restrict or plan to restrict your job search to a specific geographic region?
Indicate your principal reason for such a restriction.

60% of the fellows restricted their job search based on geography. Family considerations, lifestyle issues, spouse’s job, and professional contacts were all selected by fellows as important factors in their decisions. About 5 percent of fellows restrict their job search based on their visa status.

Indicate the area to which you restricted your job search. (Select all that apply)
How would you best describe your employer?

For forensics, government/military was the most frequent type of employer. For pediatric pathology, neuropathology and transfusion medicine, academic institutions were the most frequent employer. For hematopathology, academic and community practices both had significant representation.

What is your expected employment status?

Did you accept a part-time position?
If you received a job offer, on average, what was the starting salary offered (excluding benefits)?

Starting annual salaries ranged widely among fellowship groups. The range of $150,000 to $200,000/year was the most frequent salary range reported. About 7% of fellows in various subspecialties did not discuss a salary as part of a job offer.

In seeking employment in today’s job market, please rate the following issues in terms of their importance to you.
Did you receive a bonus?

The majority of fellows receive no bonus or only a moving bonus. Fewer receive a signing bonus.

Based on your experience, indicate the availability of pathology positions in the following categories.

Conclusions

73 percent of fellows, excluding forensics, confirmed plans to complete additional fellowship training before entering the job market. For those fellows who were seeking jobs, most applied for six or fewer available positions. However, for hematopathology and transfusion medicine programs, a significant number of fellows applied for seven or more jobs. A significant percentage of all fellows have not found jobs at the time of this survey. However, of those who received job offers, most received a job offer within 6 months or less from the time of application.
FELLOWS SURVEYED ABOUT ANTICIPATED JOB RESPONSIBILITIES

Forensic Pathology

What types of cases will make up the majority of your workload?

- 95% Medicolegal death inquiry (forensic autopsies)
- 5% Hospital autopsies
- 0% Clinical forensic pathology
- 0% Organ procurement

Hematopathology

What types of cases will make up the majority of your workload?

- 37% Hematopathology, surgical pathology, and clinical pathology
- 32% Hematopathology and surgical pathology
- 9% Hematopathology and clinical pathology
- 0% Research
- 15% Hematopathology
- 7% Other

Neuropathology

What types of cases will make up the majority of your workload?

- 25% Other
- 33% Neuropathology only
- 8% Research
- 0% Neuropathology, surgical pathology, and clinical pathology
- 34% Neuropathology and surgical pathology

Pediatric Pathology

What types of cases will make up the majority of your workload?

- 33% Pediatric pathology only
- 42% Other
- 8% Pediatric pathology and surgical pathology
- 0% Research
- 17% Pediatric pathology, surgical pathology, and clinical pathology
Fellows were surveyed about their anticipated job responsibilities. Most of fellows who were completing training in forensics were entering positions with primary forensic pathology responsibilities. More transfusion medicine and pediatric pathology fellows expected responsibilities to include non-subspecialty responsibilities in surgical and/or clinical pathology.

Fellows completing their training in hematopathology expected to be handling additional non-specialty responsibilities, with the largest group anticipating both specialty practice plus aspects of anatomic and clinical pathology practice. Most of neuropathology fellows expected their job responsibilities to be neuropathology only or combined neuropathology and surgical pathology; however, research was a significant component of the job for some.
Conclusions

- The job situation for pathology fellows is mixed, many receive one or more offers, but a substantial number of fellows are not finding employment quickly. This later circumstance may weigh on fellows’ decisions to pursue additional fellowship training. Many fellows receive a job offer within the first three months, but some need six months to a year or more for a positive response.

- There is some disparity in starting salaries for fellows coming out of training, possibly related to both specialty and range of responsibilities. Fellows coming from forensics largely expect that their job responsibilities will mirror their fellowship specialty. Most fellows completing their training in neuropathology expect to sign out in neuropathology or surgical pathology and neuropathology. Many hematopathology, pediatric pathology, and transfusion medicine fellows anticipate positions that encompass a variety of additional responsibilities including surgical and/or clinical pathology.

In learning of job opportunities please rate the following sources in terms of their importance to you. (Fellowships: FP, HP, NP, PP, TM)
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