ASCP Fellowship & Job Market Surveys

A REPORT ON THE 2014 RISE, FISE, FISHE, NPISE, PISE and TMISE Surveys
ASCP Fellowship & Job Market Surveys: A Report on the 2014 RISE, FISE, FISHE, NPISE, PISE, and TMISE Surveys:

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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 Exam (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 2490 residents participated in the Spring 2014 RISE in the following training levels: 661 PGY-1, 642 PGY-2, 640 PGY-3, and 547 PGY-4.

Of the participating residents, 85 percent are in AP/CP training, while 12 percent and 3 percent are in AP only and CP only tracks respectively. For PGY 1-4 trainees, 60 percent have U.S. medical degrees.

A total of 275 fellows participated in the five Spring 2014 Fellowship In-Service Examinations.
As part of the 2014 RISE, 1187 PGY-3/4 residents were surveyed about their experience in the fellowship process and residents’ attitudes toward fellowship training.

From the 2014 survey, the fellowships that PGY-3/4 residents have already applied for or intend to apply for are listed in order of preference:

- Surgical Pathology
- Hematopathology
- Cytopathology
- Gastrointestinal/Hepatic Pathology
- Dermatopathology
- Molecular Pathology
- Forensic Pathology
- Molecular Genetic Pathology
- Blood Banking/Transfusion Medicine
- Breast Pathology
- Gynecologic Pathology
- Genitourinary Pathology
- Pediatric Pathology
- Soft Tissue Pathology
- Renal
- Neuropathology
- Informatics
Current Interest in Applying for a Fellowship (PGY-3/4 residents only)

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)

The majority of residents (56%) plan to complete one fellowship, and 39% of residents reporting interest in doing two fellowships. A minority of residents (4%) do not plan to complete a fellowship, while only 1% plan three or more fellowships.
For what reason(s) are you interested in completing multiple fellowships?

- Desired job not available after the completion of 1st fellowship: 41%
- Need to improve “weak” areas of residency training to feel comfortable to practice: 41%
- Believe that multiple areas of subspecialty are needed to compete in the job market: 20%
- Career goals include advanced specialization in more than one field: 17%
- Family/location/timing of training: 5%
- Other: 0%

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

The majority of residents apply for at least four fellowship positions.

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

Only a small number of residents interview for more than four to six fellowship positions.
Number of Fellowship Offers Received (PGY-3/4 residents only)

The reported results for fellowship offers in 2014 were remarkably similar to previous years. Slightly more than half of residents received a single fellowship offer; only 7 percent did not receive any offers, a slight overestimate since a small percent did not apply to fellowships. 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)
Conclusions

Fellowship training in pathology is planned by 96 percent of residents. About 40 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.

- The majority of PGY-3/4 residents received only a single fellowship offer; about 40 percent received multiple offers. Less than 7 percent had not yet received a fellowship offer, suggesting that only a small number of residents are not finding fellowship opportunities.

- Surgical pathology remains the top fellowship choice; cytopathology and hematopathology continue to trade for the No. 2 fellowship spot, while GI/hepatic pathology and dermatopathology round out the top five fellowship specialties. Molecular pathology has jumped five slots since 2013 into position No. 6.
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 42 percent of residents citing no exposure to pathology and/or no first-hand pathology experience during medical school. Less than one-quarter of residents felt that their medical school education prepared them for pathology residency training.

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.
Do you anticipate feeling ready to sign-out general pathology cases upon graduation from residency? (All residents)

Almost 70% of residents are ready to sign-out knowing that colleagues are available for back-up, but a third are not ready or need a transition period.

Why don’t you anticipate feeling ready to sign-out cases upon graduation from residency? (PGY-1/2 and PGY-3/4)

- Need fellowship training to feel confident in general pathology
- Not prepared – educational deficiency
- Not enough graduated responsibility in training program
- Did not see enough volume of cases in residency
- Did not see enough variety of cases in residency

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 about half have overnight preview time.
Graduated sign-out experience
(All residents)

A percentage of residents at every training level felt that they would not be independent at graduation, but the reasons for this changed somewhat with time-in-training. Most residents think that a fellowship is needed for confidence in signing out cases independently.

PGY-1/2 trainees were more concerned about educational deficiencies (29 percent) than PGY-3/4 (18%). In addition, a lack of graduated responsibility emerged as a significant reason for deficiency, with the percent more than doubling from PGY-1/2 to PGY-3/4. As an example, 87 percent of residents do not sign-out frozen sections on their own.

Nearly 100 percent of the residents who experience graduated sign-out feel that they benefit from completely working up the case on their own, independently writing the report, and then having the attending do a final review. However, one-fifth of residents at every level of training consistently note that there is no form of graduated sign-out during their residency; 79 percent of such residents would like graduated sign-out to be instituted.

Conclusions

- Pathology residents overwhelmingly felt that their medical school education had not adequately prepared them for their pathology residency.
- Nearly all residents have overnight or morning/day-of preview time, and about half would benefit from more preview time while the other half feel that they have an appropriate amount of preview time.
- Other than completing their planned fellowships, help for residents in 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.
Although relatively few pathology residents opt to go directly from training into the job market, both the ASCP Resident Council and the RISE Committee deem it critical to survey residents in this situation and report relevant information for future trainees.

**Number of Jobs Formally Applied For**

In 2014, only 48 PGY-3 and PGY-4 residents were considering entering the job market, with 60% receiving one or more job offers.

**Number Of Job Offers Per Resident**

Of the 48 residents who considered job opportunities, 40% did not receive job offers, and most only had a single offer.
Helpful Employment Resources

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.

Salary Range for Residents Who Accepted a Job Offer Directly After Residency Training

- 10% received a salary of $150,000 - $200,000/year
- 14% received less than $100,000/year
- 17% did not discuss a starting salary
- 28% received more than $250,000/year
- 28% received $100,000 - $150,000/year
- 3% received $200,000 - $250,000/year

Scale for related chart: 5=extremely important, 4=somewhat important, 3=minor importance, 2=not important, and 1=not a consideration.)
Residents who chose to take a job immediately after residency were asked to rank factors in their job choice. The working environment remained at the top of the list, while family and geographic considerations, and long-term job security were close behind as next-most important.

Conclusions

- The number of PGY-3/4 residents who formally considered job openings in 2014 is small at only 48, from 139 in 2012. In the 2014 survey, 60 percent received a job offer.
RESIDENTS’ PERCEPTIONS ON TRAINING AND HEALTH CARE

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, but of the PGY-4 residents who listed a preference, academic and community positions were selected equally.

How confident are you about finding the pathology job you desire?

More than half of trainees are somewhat to very confident that they can find their desired pathology job position, leaving not quite half 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.

Although the resident comfort level with the business aspects of pathology increases somewhat during training, only about half of PGY-4 individuals say that they are at least minimally prepared for pathology business. Yet, at least a third of graduating PGY-4 residents seek positions within community group practice, a setting where such skills are important for success.
More than 90 percent of all residents would like to have a centralized database of employment opportunities in both private and academic fields, with information on the types of pathologists employed.

**Student Loans**

What was/is your general range of student loans when you exited medical school?

Has or will your amount of student debt influence your job choice?
About 40 percent of pathology residents have no student loans at the time of medical school graduation. About 40 percent have more than $150,000 in debt, and one-quarter of all residents have more than $200,000 in debt. For residents who had student loans, about half felt that debt would affect their choice of practice setting and/or subspecialty.

**Resident Feelings About U.S. Healthcare in General**

Given the current economic/political environment, what is your general feeling about the future of the healthcare system in United States?

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

Of the residents surveyed who plan to live and practice in the United States nearly two-thirds of those residents overall are pessimistic about the future of United States health care in general and pathology practice compensation in particular.

**How do you feel resident education is prioritized at your program?**

In response to questions about the importance of resident education at their institution, 40 percent indicated that education was a high priority. About 50 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?

About a third of residents indicated that their AP and CP educational experiences were similar, but one fourth of residents indicated that AP was emphasized more and had a better curriculum.

How comfortable are you expressing your fellowship/career plans?

The vast majority of residents (90 percent) were comfortable or fairly comfortable expressing their career plans, while only 4 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 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 program, 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, autonomy, 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 this small subset, 60% receive offers.
- Although 30 percent or more of the residents are clearly interested in community practice, residency training in the business and management aspects of practice is lacking, both in terms of structured teaching and experience. A centralized database of employment opportunities for pathology would be highly desirable.
- 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.

**APPLYING FOR PATHOLOGY JOBS AFTER FELLOWSHIP**

ASCP offered five Fellowship in-service examinations for the Spring of 2014: 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 Exam (TMISE).

Fellow in-service examinations were taken by 275 individuals; post-exam surveys offered the chance to query fellows in Forensics (n=37), Hematopathology (n=128), Neuropathology (n=43), Pediatric Pathology (n=18), and Transfusion Medicine (n=49) about their experience entering the job market and any plans for additional specialty training.

**Which of the following best describes your residency training program?**

![Bar chart showing the distribution of residency training programs among fellows](chart.png)

About half of all fellows surveyed are currently in university public hospital training programs, with another third in university private hospital settings; the remainder is split between community, military, and other teaching settings. About 55–75% of fellows received medical training in the United States, depending on specialty.
Did you receive your medical degree in the United States?

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

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More than 70% of surveyed fellows are already diplomates of the American Board of Pathology, with the majority certified in AP/CP. Between 10 to 40 percent of forensics, neuropathology, and pediatric pathology are certified in AP only, while 30 percent of transfusion medicine fellows are boarded only in CP.

In which areas are you a diplomate of the ABP (select all that apply)?

- FP
- HP
- NP
- PP
- TM

- AP/CP
- AP Only
- CP Only
- Subspecialty
The majority of fellows in Forensics, Hematopathology, and Pediatric Pathology came from a background of AP/CP residency training; as expected, 70 percent of Neuropathology and 50 percent of Transfusion Medicine fellows completed their residency training in AP-only and CP-only tracks, respectively.

Indicate your residency training track.

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

Although the majority of fellows in all five specialties applied for modest numbers (< seven) of employment positions, more than 56 percent of hematopathology, and 39 percent of transfusion medicine fellows had seven or more applications and 40 percent of hematopathology fellows had greater than ten applications.
For how many jobs did you formally interview?

How many job offers did you receive?

Did you receive a job offer at your own residency or fellowship training program?
Most fellows interviewed for one to three positions. In 2014, about 40-60 percent of neuropathology, transfusion medicine, and hematopathology fellows did not receive job offers, and 12-24% of forensic and pediatric pathology did not receive offers. Although some fellows in each subspecialty received multiple offers, for each category the majority received only one offer.

The majority of fellows who did find jobs did so within six months. About 40 percent of Hematopathology fellows took six months to greater than a year to find a job, but all except forensic pathology fellows have fellows who took longer than one year. This is a significant change from previous years.

We asked current fellows the following: “Are you going to do an additional fellowship in a subspecialty other than your current fellowship?”

Between 35 to 72 percent of fellows are planning to complete an additional fellowship besides the one they had just finished. Overall, 45 percent of all fellows surveyed plan to complete two or more fellowships, similar to survey results of previous years.
How many fellowships do you intend to complete?

Indicate your principal reason for pursuing fellowship training.

Fellows from all five subspecialties indicate that fellowship training improves employability and enhances pathology skills. Competition in the job market was another important motivator. About 22 percent of fellows had completed another fellowship at time of the survey, about a third in surgical or cytopathology. Another 35 have already accepted a fellowship for 2014-15.
For what reason(s) are you interested in completing multiple fellowships?

- Career goals include advanced specialization in more than one field
- Believe that multiple areas of subspecialty are needed to compete in a sparse job market
- Need to improve “weak” areas of residency training to feel comfortable to practice
- Desired job not available after the completion of 1st fellowship
- Family/location/timing of training

Did you restrict or plan to restrict your job search to a specific geographic region?

About a half of the fellows restricted based on geography. For those residents, family considerations were most important followed by lifestyle issues. About 10 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.

- Family considerations
- Lifestyle issues (weather, culture, extra-curricular activities available)
- Professional contacts in area
- Native to the area
- Spouse’s job

Indicate your principal reason for such a restriction.
Except for forensics, the highest percentage of each subspecialty chose an academic job. For forensics, government/military was first, followed by an academic job. Between 59 to 100 percent of positions were as salaried employees; only hematopathology (35 percent) and transfusion medicine (30 percent) fellows accepted significant numbers of partner/partner track jobs. Only a handful (5 percent) of all jobs were part-time positions.
Starting annual salaries ranged widely among fellowship groups. Very few forensic, transfusion medicine, or neuropathology fellows reported starting annual salaries of $200,000 or more. About 5 percent of fellows overall did not discuss a salary as part of a job offer.

If you received a job offer, on average, what was the starting salary offered (excluding benefits)?

In seeking employment in today's job market, please rate the following issues in terms of their importance to you.

1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important
Did you receive a bonus?

For hematopathology, pediatric pathology, and transfusion medicine, 50-70 percent receive a signing and/or moving bonus for their new job. For forensics and neuropathology, the majority receive neither.

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

Conclusions

About 45 percent of fellows confirmed plans to complete additional fellowship training, defined as two or more pathology fellowships before entering the job market. For those fellows who were seeking jobs, most applied for one to six 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.
FELLOWS SURVEYED ABOUT ANTICIPATED JOB RESPONSIBILITIES

Fellows were surveyed about their anticipated job responsibilities. Almost 100 percent of fellows who were completing training in forensics were entering positions with primary forensic pathology responsibilities. About a half of pediatric pathology fellows and transfusion medicine fellows expected that their workload would be limited to their pathology fellowship specialty.

By contrast, 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. Nearly 90 percent of neuropathology fellows expected their job responsibilities to be neuropathology only or combined neuropathology and surgical pathology.

In learning of job opportunities please rate the following sources in terms of their importance to you.

1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat, 5 = Extremely.
**Forensic Pathology**
What types of cases will make up the majority of your workload?

- 97% Medicolegal death inquiry (forensic autopsies)
- 3% Other - FP

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

- 39% Hematopathology, surgical pathology, and clinical pathology
- 15% Hematopathology only
- 5% Other - HP

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

- 47% Neuropathology and surgical pathology
- 40% Neuropathology only
- 7% Other - NP

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

- 46% Pediatric pathology only
- 15% Pediatric pathology and surgical pathology
- 8% Other - PP

**Research**
0%

**Organ procurement**
0%

**Clinical forensic pathology**
0%

**Hospital autopsies**
0%
Transfusion Medicine

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

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 right away. This latter circumstance may weigh on fellows’ decisions to pursue additional fellowship training. Many fellows receive a job offer within the first six months, but some need up 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 combine surgical pathology and neuropathology. Many hematopathology, pediatric pathology, and transfusion medicine fellows anticipate positions that encompass additional responsibilities including surgical and/or clinical pathology.
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