



**STRONGERTOGETHER**

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# ASCP FELLOWSHIP & JOB MARKET SURVEYS

A REPORT ON THE 2017  
RISE, FISE, FISHE, NPISE, PISE AND TMISE SURVEYS



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# INTRODUCTION

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

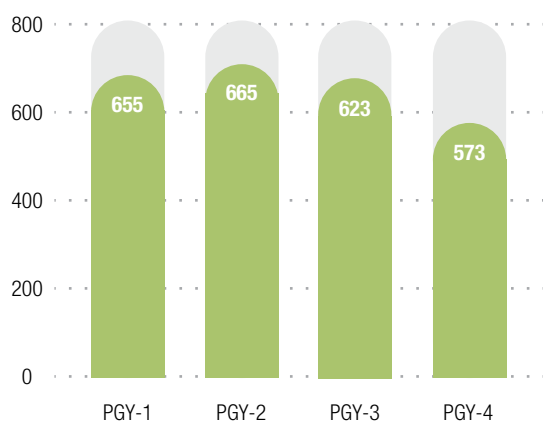
The surveys are conducted as part of the Resident In-Service Examination (RISE), and the Fellow Forensic In-Service Examination (FISE), the Fellow In-Service Hematopathology Examination (FISHE), Fellow Neuropathology In-Service Examination (NPISE), Fellow Pediatric Pathology In-Service Examination (PISE), 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 2516 residents participated in the Spring 2017 RISE and survey in the following training levels: 655 PGY-1, 665 PGY-2, 623 PGY-3, and 573 PGY-4.

Of these residents, 84 percent are in AP/CP training, while 12 percent and 4 percent are in AP-only and CP-only tracks respectively. For PGY 1-4 trainees, 55 percent have U.S. Medical Degrees.

A total of 304 fellows participated in the five Spring 2017 Fellowship In-Service Examinations and surveys.

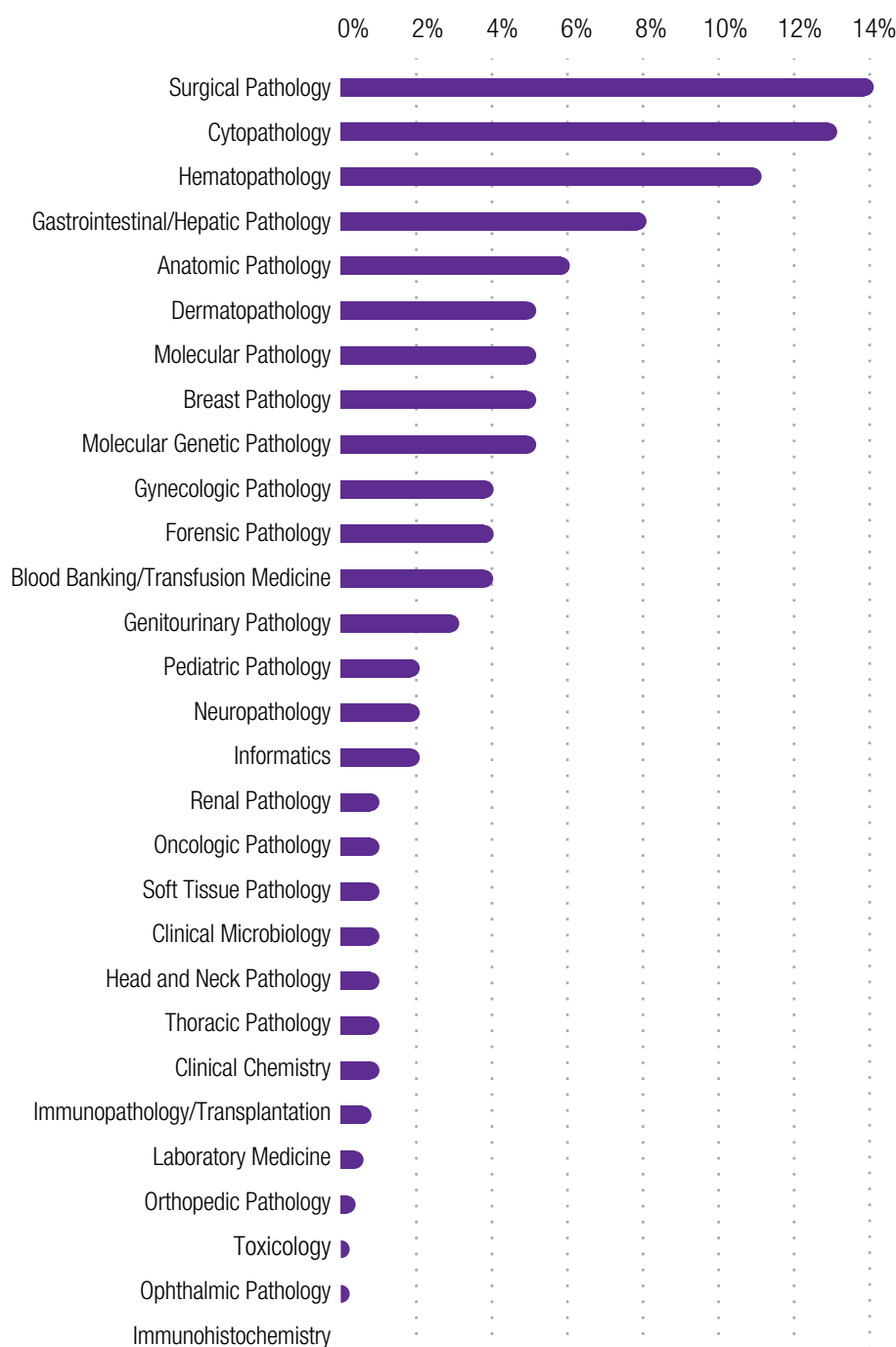
## 2017 RISE Participants



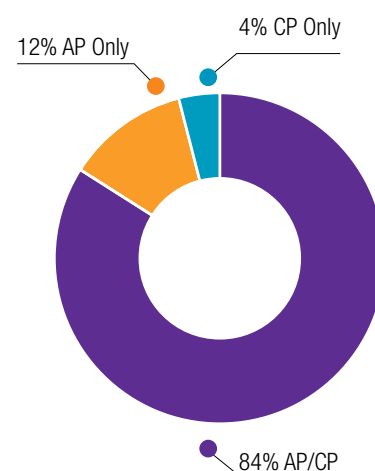
# APPLYING FOR PATHOLOGY FELLOWSHIPS

As part of the 2017 RISE, 1196 PGY- 3/4 residents were surveyed about their experience in the fellowship process and residents' attitudes toward fellowship training.

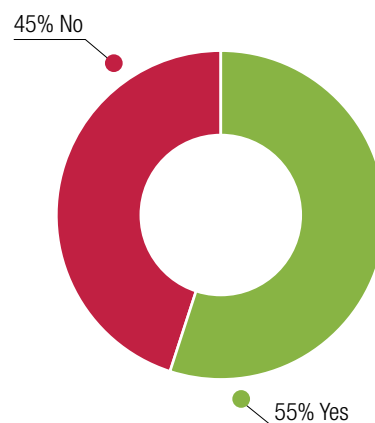
## From the 2017 survey, the fellowships already applied for or intend to apply for (PGY-3/4 residents only)



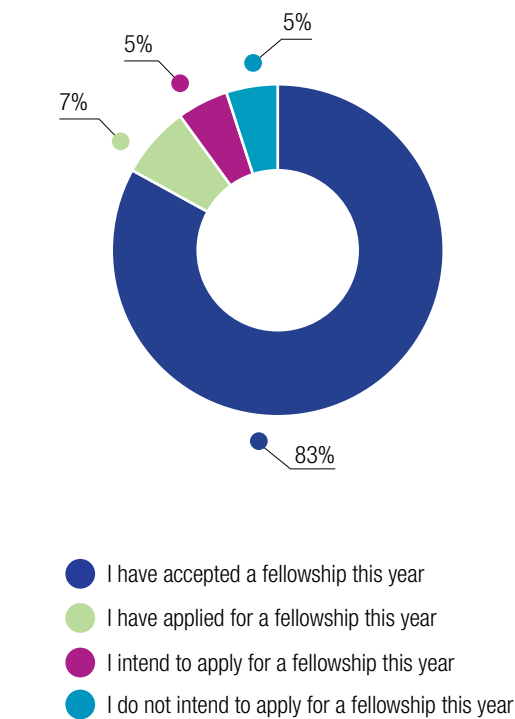
## Indicate your residency training track



## Did you receive your medical degree in the United States?

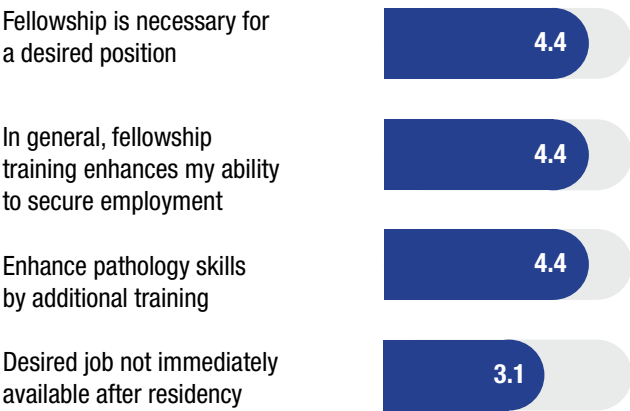


## Current Interest in Applying for a Fellowship (PGY-3/4 residents only)



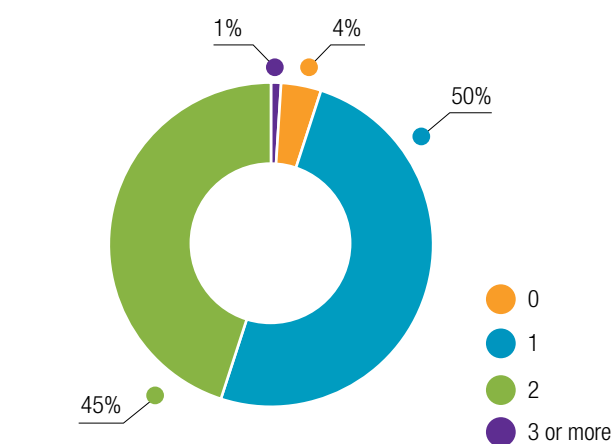
## Principal Reason for Pursuing a Fellowship (All residents)

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. (1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)



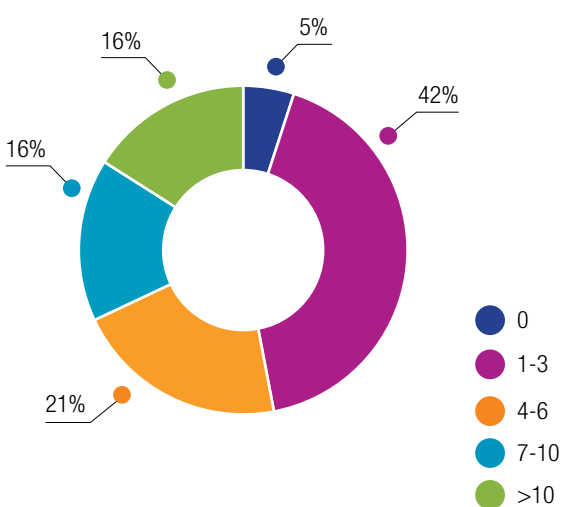
## Number of Fellowships Intended to Complete (All residents)

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.



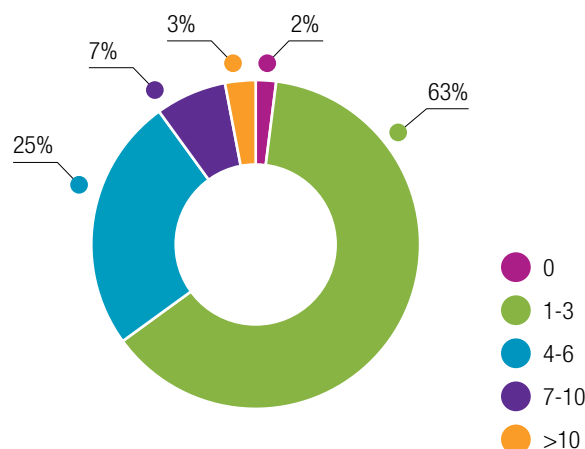
## Number of Fellowship Programs Formally Applied To (PGY-3/4 residents only)

42% of the residents applied to 1-3 fellowship programs, 21% applied to 4-6 fellowships, and 32% applied for 7 or more fellowships.



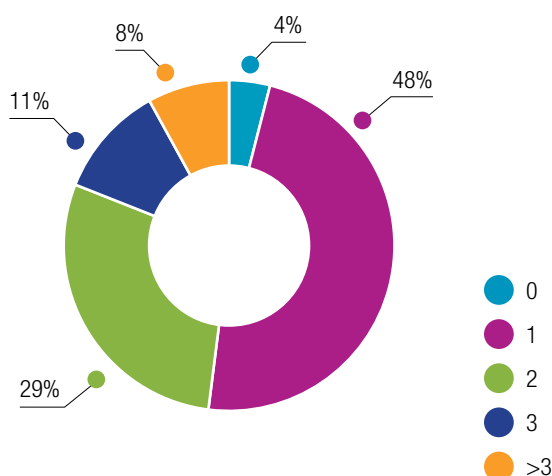
## Number of Fellowship Interviews Received (PGY-3/4 residents only)

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)

About a half of residents received a single fellowship offer; only 4 percent of PGY3/4 had not received any offers at time of survey. 48 percent of residents had positive responses from two or more fellowship programs, suggesting that there is competition among fellowship programs for strong applicants.



# Conclusions

Fellowship training in pathology is planned by 96 percent of residents. 46 percent choose to pursue two or more fellowships.

- 48% of PGY-3/4 residents received a single fellowship offer; 48 percent received multiple offers. Only 2 percent of PGY-4 residents had not yet received a fellowship offer, suggesting that only a small number of residents are not finding immediate fellowship opportunities. A PGY 3 resident would still have another year to find a position.
- Surgical Pathology is the top fellowship of choice; Cytopathology, Hematopathology, GI/hepatic pathology and Anatomic pathology round out the top five fellowship specialties.

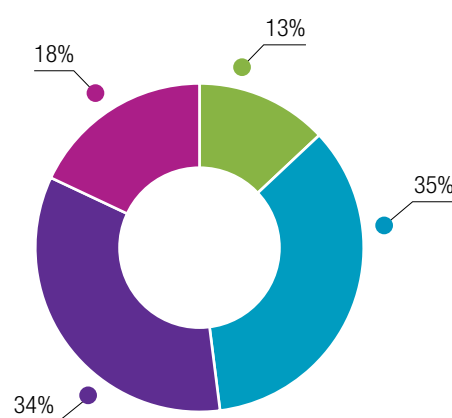
# PREPARATION FOR RESIDENCY AND FOR INDEPENDENT WORK

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 procedures.

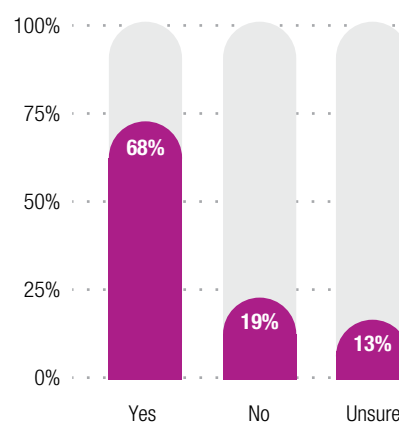
## How well did your medical school training prepare you for your pathology residency? (All residents)

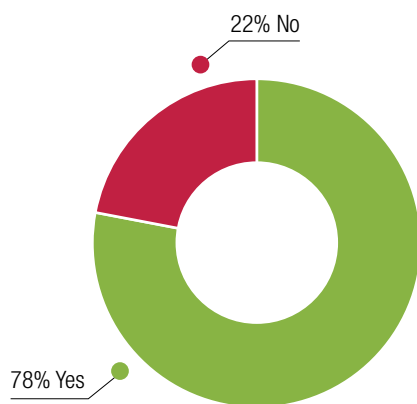
Medical school preparation for pathology residency training is problematic with 48 percent of residents citing no exposure to pathology and/or no first-hand pathology experience during medical school. Less than 20 percent of residents felt that their medical school education prepared them for pathology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

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



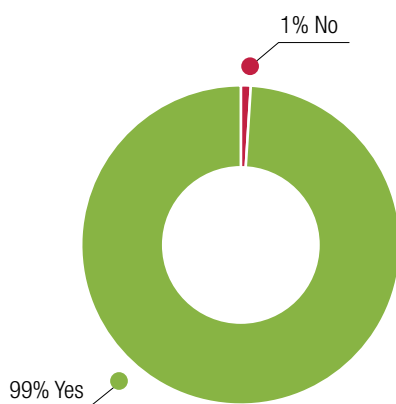
## Is there any form of graduated sign-out at your institution (do your senior residents completely work up and write out reports on your own with only a final glance over from the attending)? (All residents)





Do you want graduated sign-out to be instituted? (All residents)

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Do you benefit from graduated sign-out? (PGY-4 residents only)

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Approximately 19% of residents note that there is no form of graduated sign-out during their residency; with another 13% unsure about the practice. 99% of PGY-4 residents believe that graduated sign-out benefits them.

## Conclusions

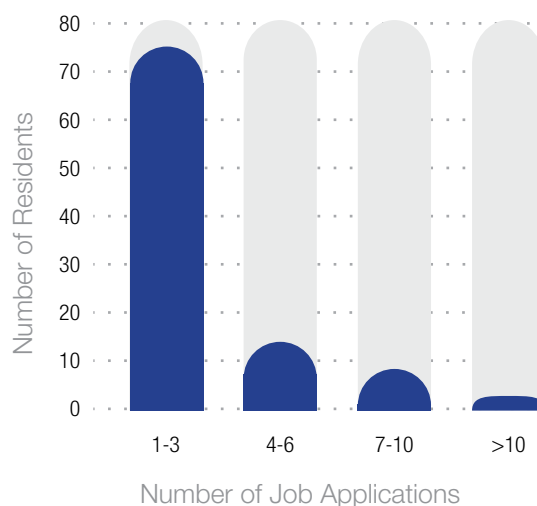
- Pathology residents overwhelmingly felt that their medical school education had not adequately prepared them for their pathology residency, with only 18% stating that they had adequate experience and education.
- A majority of residency programs include graduated sign-out responsibilities, and nearly all residents view it as beneficial.

# APPLYING FOR PATHOLOGY JOBS IMMEDIATELY AFTER RESIDENCY

Although a minority of pathology residents choose 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 2017, 99 PGY-3/4 formally applied for jobs. This is an increase over the number observed in 2016 (n=18)



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

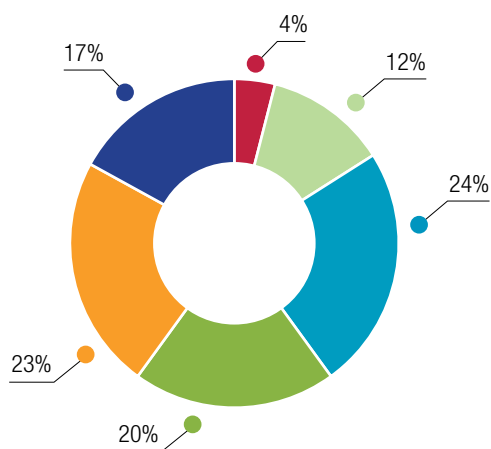
- PGY-3
- PGY-4





## Salary Range for Residents Who Accepted a Job Offer Directly After Residency Training (PGY-3/4 residents only)

- <\$100,000/year
- \$100,000 - \$150,000/year
- \$150,000 - \$200,000/year
- \$200,000 - \$250,000/year
- >\$250,000/year
- A starting salary was not discussed



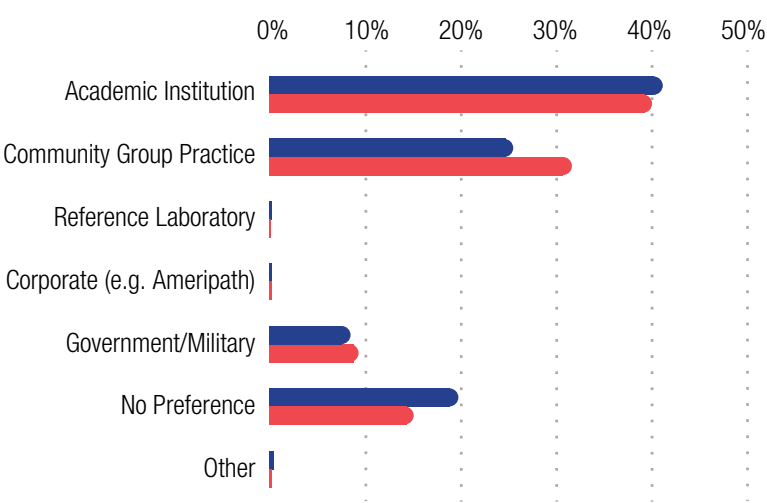
## Conclusions

- 99 PGY-3/4 residents formally applied for a job starting immediately after residency. In 2017, 69 of these residents seeking an immediate job received a job offer (44 PGY-4s and 25 PGY-3s).

What type of practice environment do you plan to seek or are currently seeking? (PGY 1-3 vs. PGY-4)

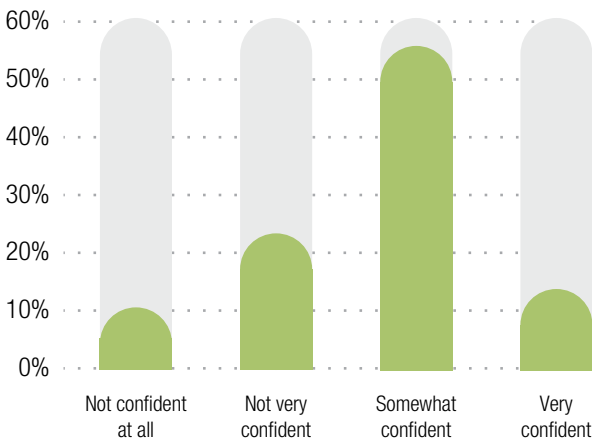
Interestingly, PGY-1, PGY-2, and PGY-3 trainees consistently ranked academic positions as their preference by a margin of >10 percent over community practice and other options, but of the PGY-4 residents who listed a preference, the difference between the number choosing academic and community positions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

PGY 1-3 PGY-4



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

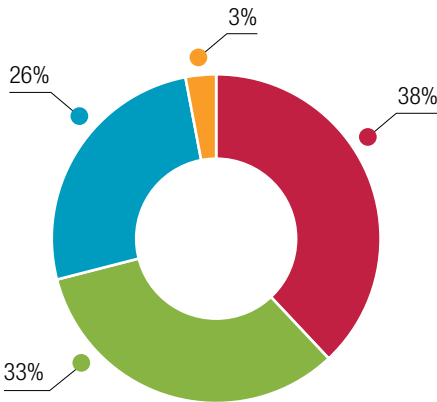
69% of trainees at all levels are somewhat to very confident that they can find their desired pathology job position, leaving a large number of residents lacking confidence about obtaining a job.



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

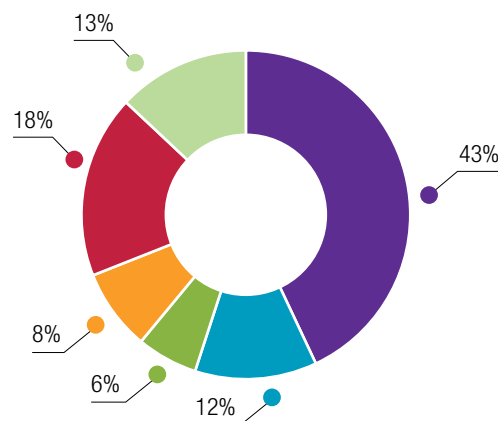
Very few senior residents have a high comfort level with pathology business/management. 62% have some level of confidence with the business aspect of pathology leaving 38% lacking confidence. Yet, about a third of graduating PGY-4 residents seek positions within community group practice, a setting where such skills are especially important for success.

Yes, minimally (some coding experience)  
Yes, moderately (exposure to coding and some lectures or other experience with management issues)  
No  
Yes, definitely (you feel you have the necessary skills to handle some business aspects of pathology, including eventually assuming managerial roles within a practice setting)



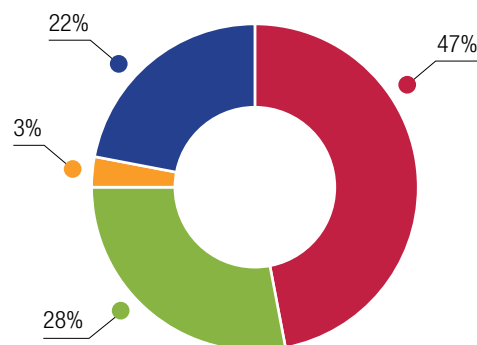
## What was/is your general range of student loans when you exited medical school? (All residents)

- Less than \$99,99
- \$100,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000 - \$300,000
- Greater than \$300,000
- No student loans



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

- No
- Yes, it will affect the type of practice setting I prefer to enter (private practice, academic practice, reference laboratory, etc)
- Yes, it will affect the subspecialty area in which I choose to practice
- Yes, it will affect both the practice setting and subspecialty areas in which I choose to practice

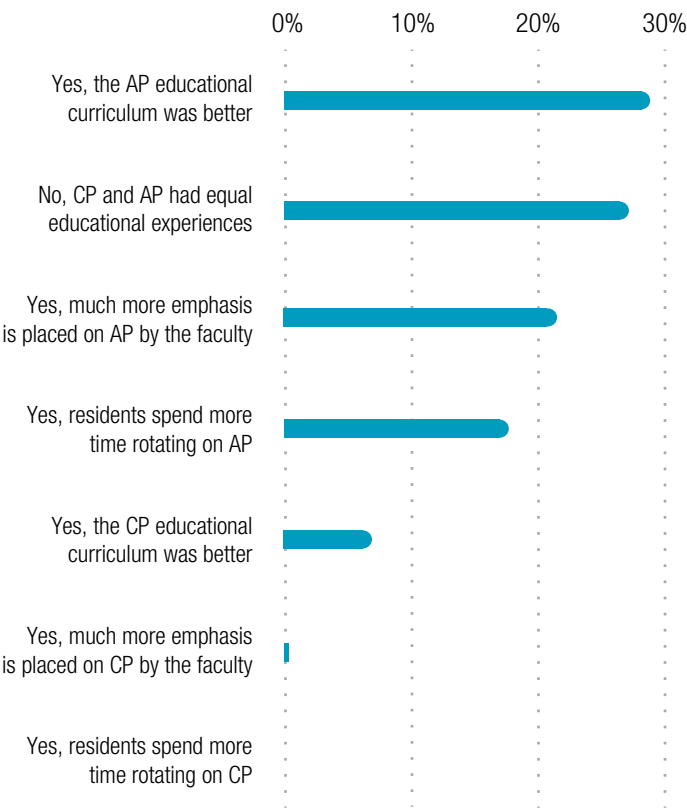


## Student Loans

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 about 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.

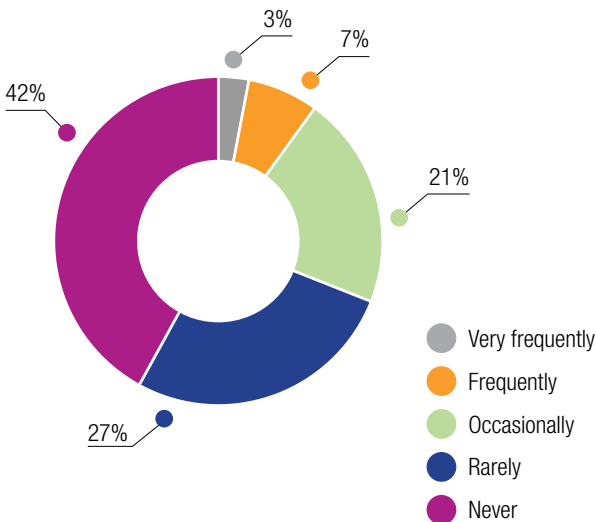
## Was there a large discrepancy between AP and CP educational experiences? (Select all that apply, PGY-3/4 residents)

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.



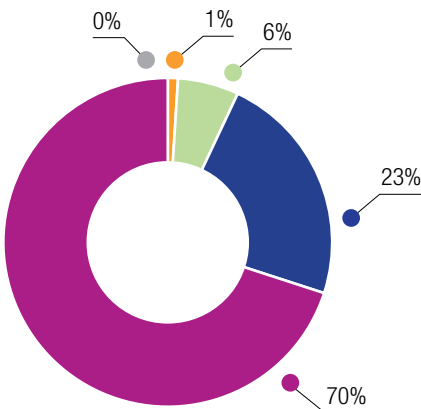
## How often are you pulled from CP rotation to cover AP service? (All residents)

In response to questions about service coverage, residents responded that there is an increased tendency to be pulled off CP rotations for AP coverage (36%; combined “very frequently” + “frequently” + “occasionally”) than to be pulled off AP rotations for CP coverage (9%).



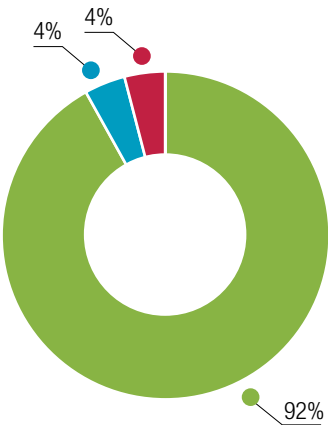
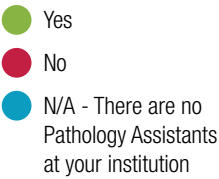
## How often are you pulled from AP rotation to cover CP service? (All residents)

- Very frequently
- Frequently
- Occasionally
- Rarely
- Never



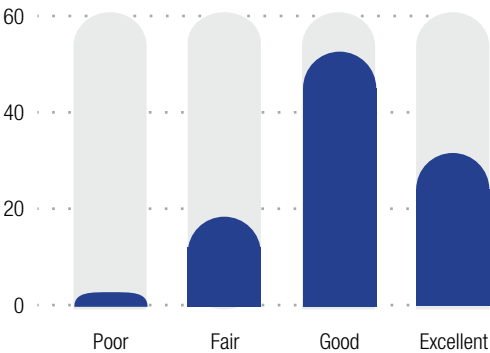
### Do you work with Pathology Assistants at your institution? (All residents)

92% of residents also report working with Pathology Assistants at their institutions.

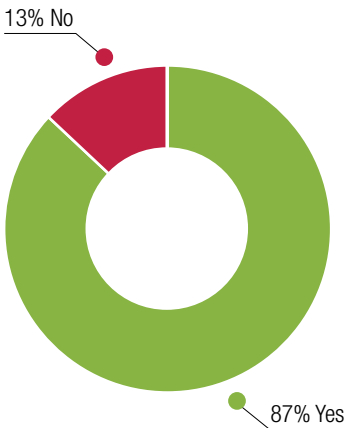


### Rate your program for quality of education: (All residents)

Three fourths of residents rated their program's quality of education as "good" or "excellent", and overall satisfaction with residency training programs was high (87%). PGY-1 residents were more likely to rate their programs as "excellent".

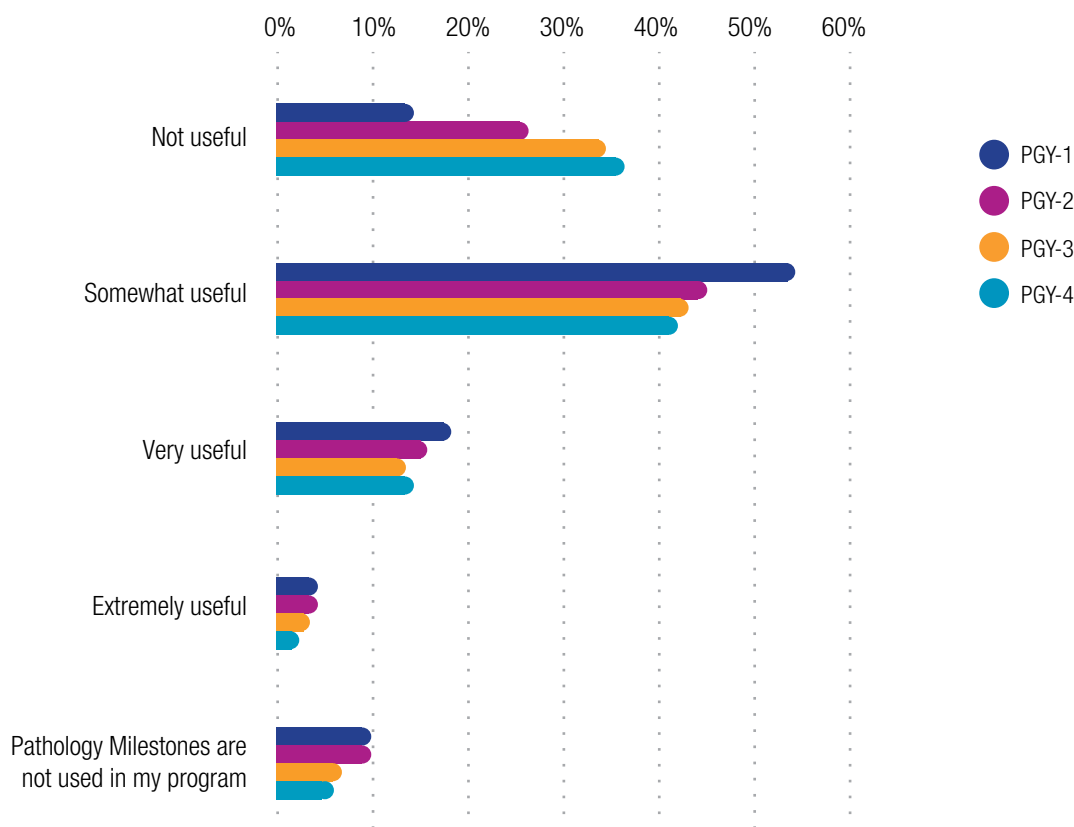


### Overall are you satisfied with your current residency training program? (All residents)



## How useful do you think milestones are to you in your preparation for pathology practice?

PGY-1 residents had a more favorable impression of the utility of Pathology Milestones in preparation for pathology practice. This may reflect the more recent incorporation of Pathology Milestones into the ACGME Next Accreditation System, versus more senior residents who began training prior to their implementation in pathology training programs.



## Conclusions

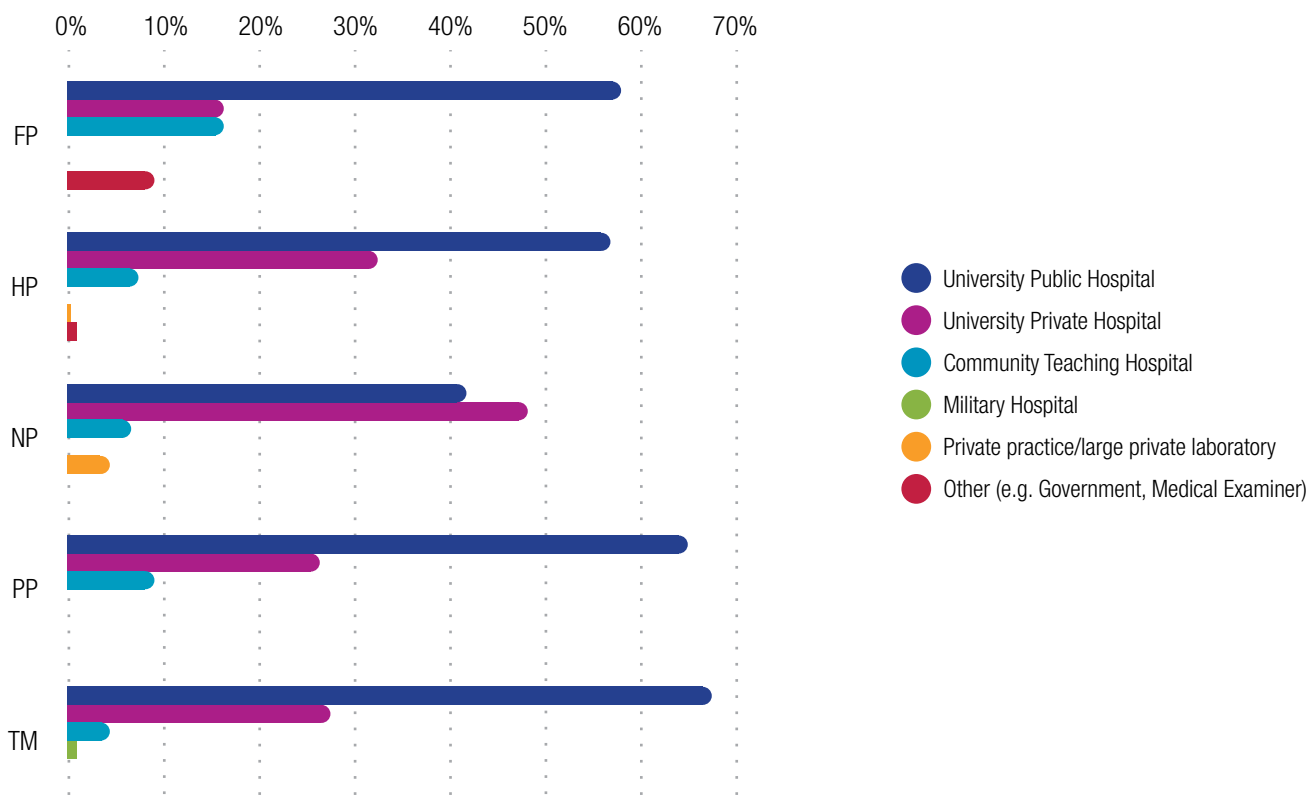
- Very few residents are seriously considering jobs right out of pathology training. Of the PGY-3/4 residents seeking immediate jobs, 69 of 99 received offers.
- About a third of the residents are clearly interested in community practice. Residency training in the business and management aspects of practice 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.
- The Pathology Milestones are viewed to be useful by most residents.

ASCP offered five Fellowship in-service examinations for the Spring of 2017: 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).

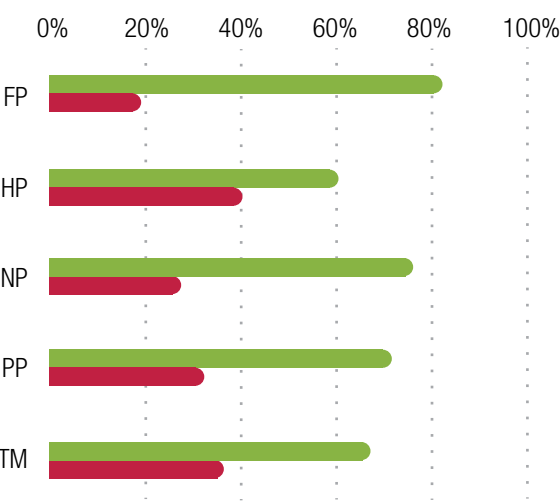
Fellow in-service examinations were taken by 304 individuals: post-exam surveys offered the chance to query fellows in Forensics (FP, n=43), Hematopathology (HP, n=134), Neuropathology (NP, n=52), Pediatric Pathology (PP, n=23), and Transfusion Medicine (TM, n=52) about their experience entering the job market and any plans for additional specialty training.

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

57% of all fellows trained in university public hospital training programs, with approximately 30% 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.

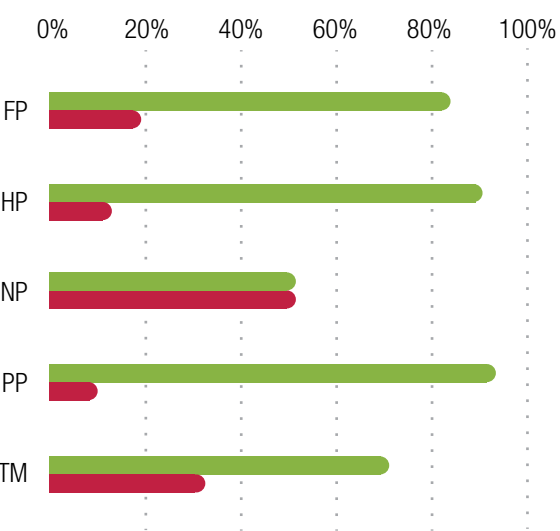


## Did you receive your medical degree in the United States?



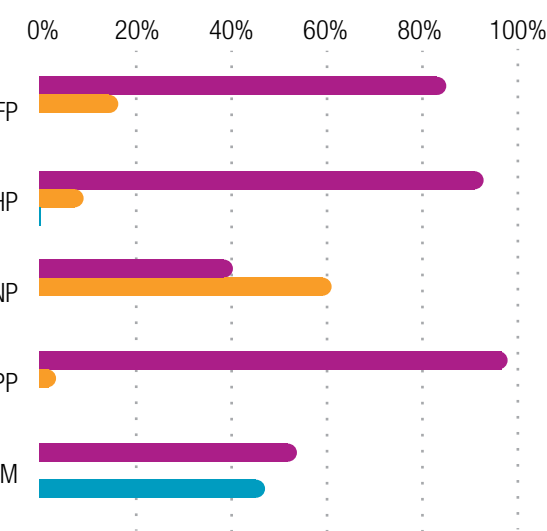
## Are you a diplomate of the American Board of Pathology (ABP)?

77% of surveyed fellows are already diplomates of the American Board of Pathology.



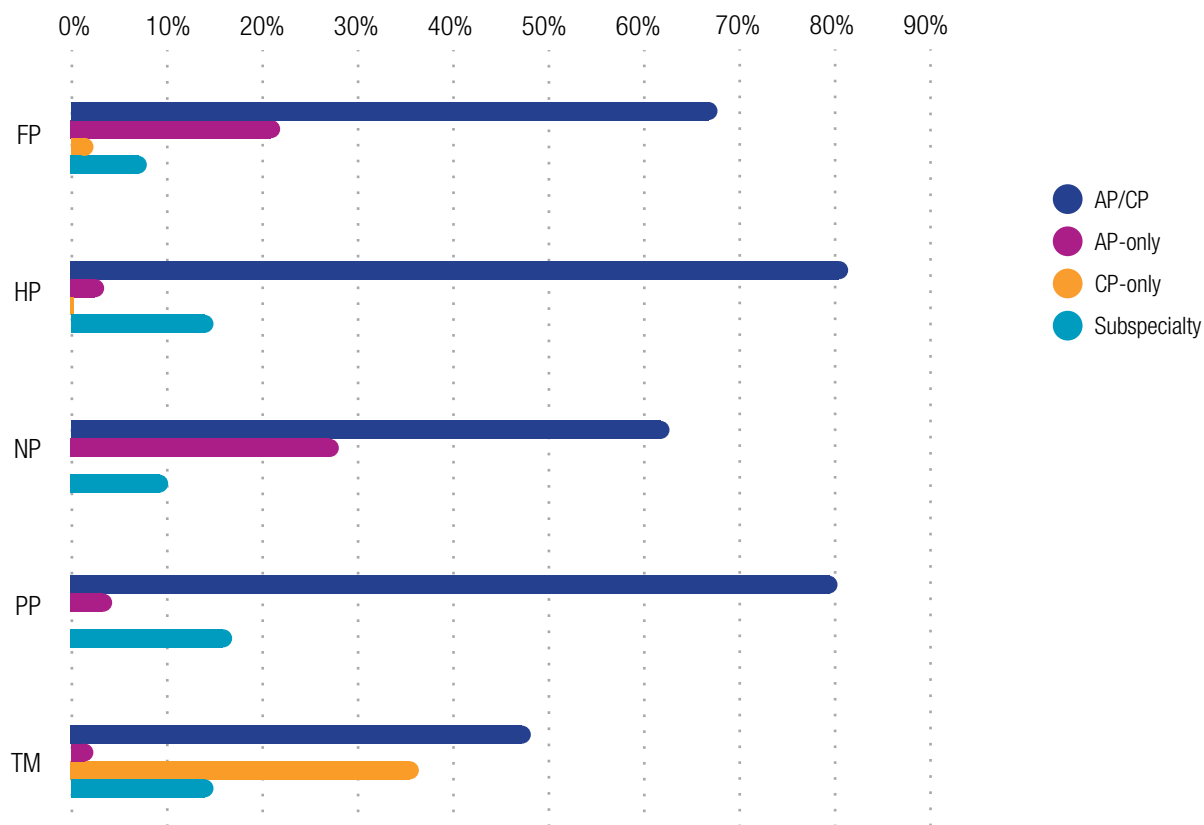
## Indicate your residency training track.

The vast majority of fellows in Forensics, Hematopathology, and Pediatric Pathology came from a background of AP/CP residency training. In contrast 60 percent of Neuropathology and 46 percent of Transfusion Medicine fellows completed their residency training in AP-only and CP-only tracks, respectively.





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



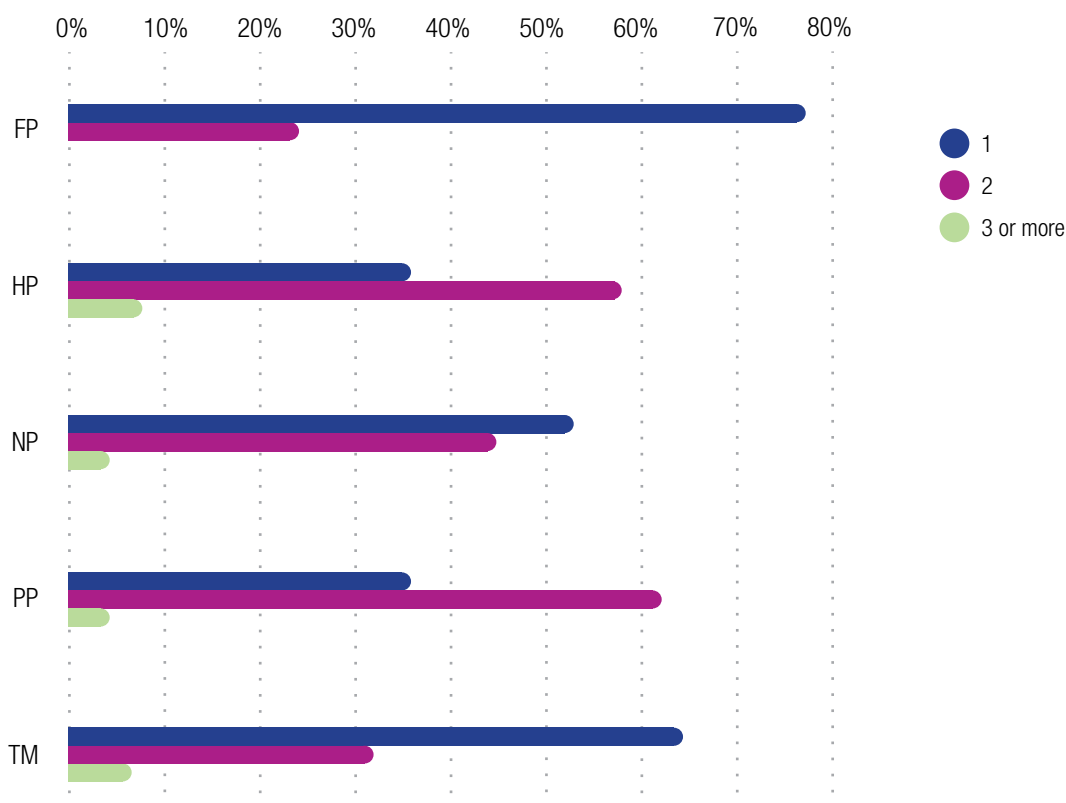
# ADDITIONAL SUBSPECIALTY FELLOWSHIPS

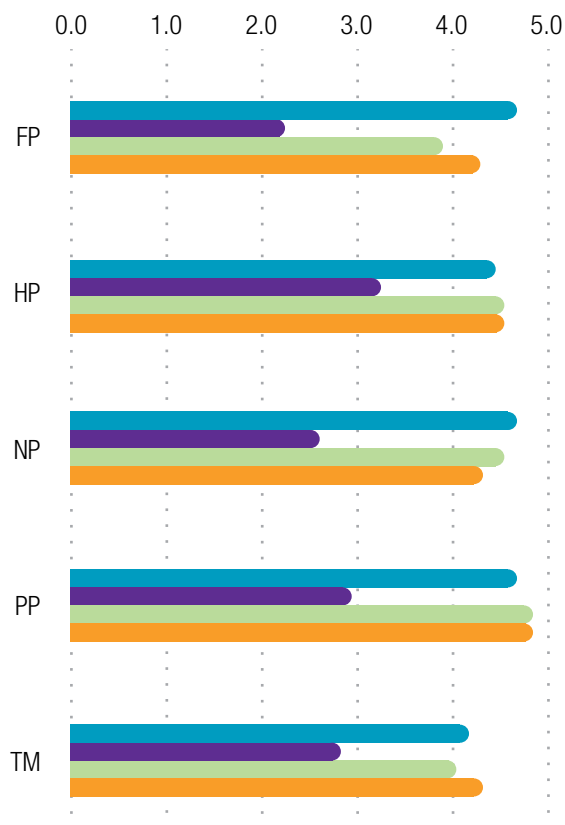
We asked current fellows the following:

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

77 percent of forensic pathology fellows will only complete one fellowship. Between 44-61 percent of fellows in other subspecialties are planning to complete a second fellowship. Very few are planning more than two fellowships.

## How many fellowships do you intend to complete?

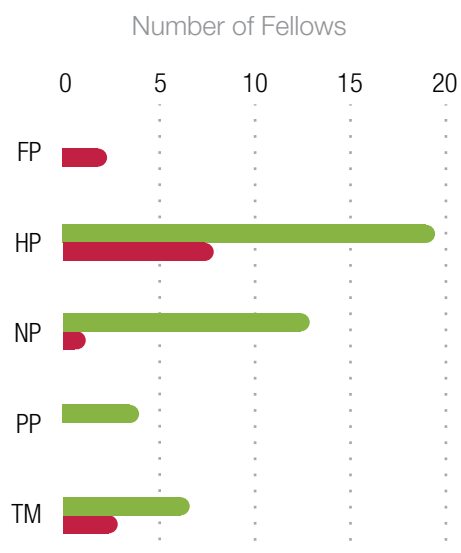




## Indicate your principal reason for pursuing fellowship training

Fellows from all five subspecialties indicate that fellowship training improves employability and enhances pathology skills needed for a specialty that may benefit from cross training. Competition in the job market was another important motivator. (1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)

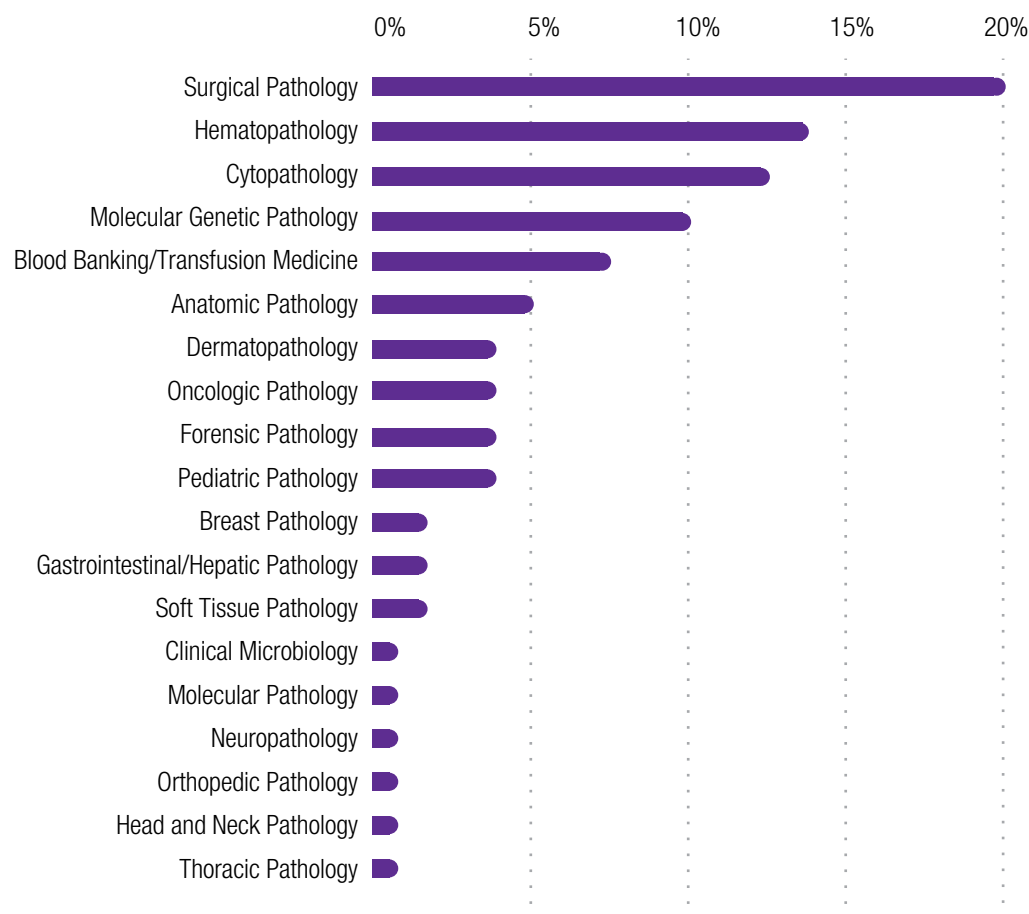
- Fellowship is necessary for a desired position
- Desired job not immediately available after residency
- Enhance pathology skills by additional training
- In general, fellowship training enhances my ability to secure employment



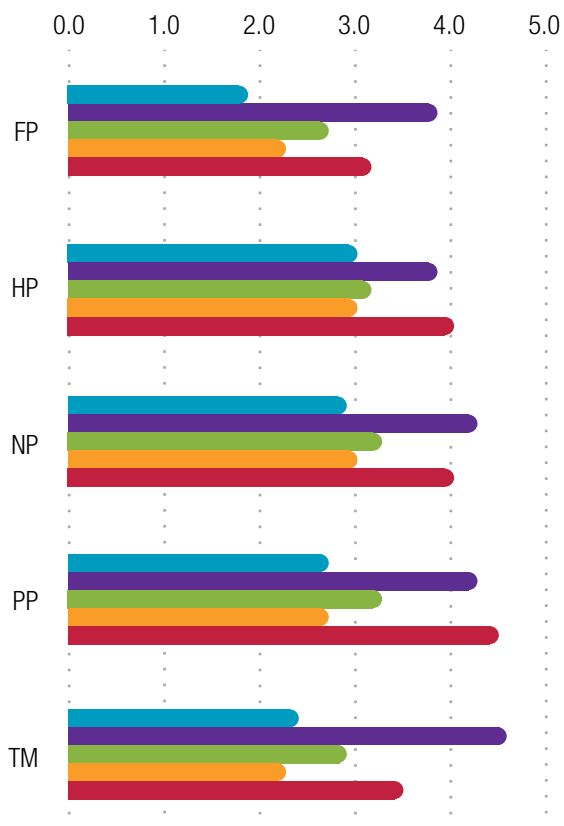
## Are you going to do an additional fellowship in a subspecialty after your current fellowship pathology training?

- Yes
- No

What fellowship(s) have you completed (Check all that apply)?



24 percent of fellows (n=91) had completed another fellowship at time of the survey, including surgical pathology (n=18), hematopathology (n=13), cytopathology (n=12), or molecular genetic pathology (n=9). Another 14 percent have indicated that they were going to pursue an additional fellowship.

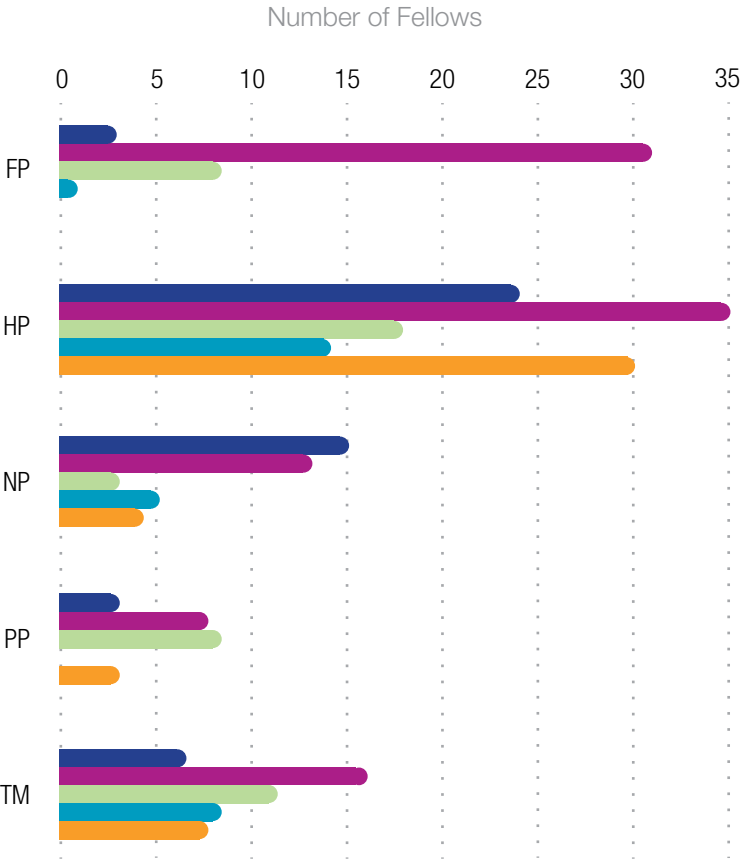


## For what reason(s) are you interested in completing multiple fellowships?

(1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)

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

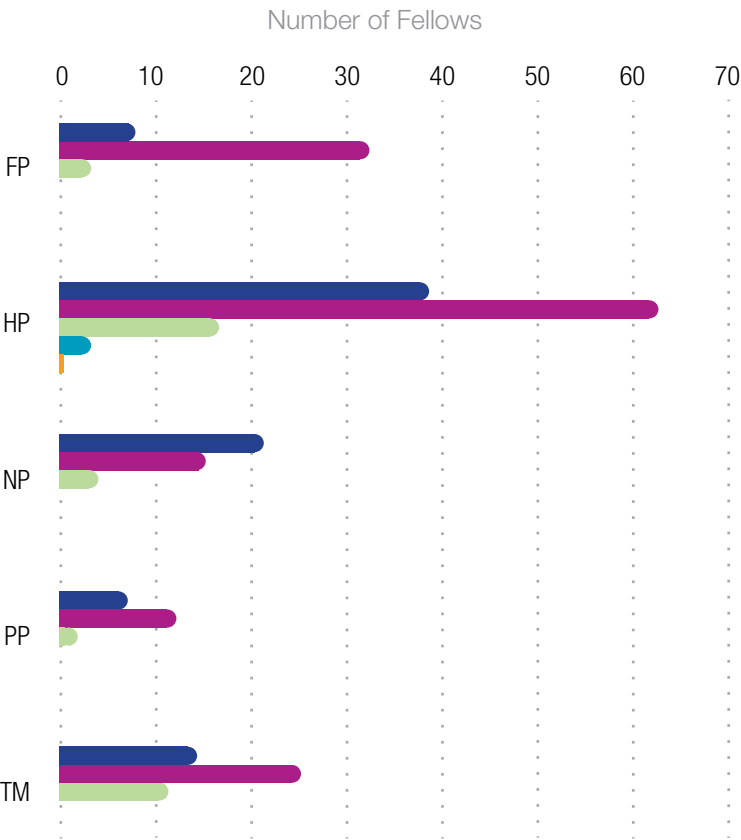
# APPLYING FOR PATHOLOGY JOBS AFTER FELLOWSHIP



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

The number of job applications varies widely by specialty. 72% (31/43) of Forensic Pathology fellows applied for 1-3 jobs. In contrast, 37% (44/120) of the Hematopathology and 31% (15/48) of the Transfusion Medicine fellows applied for 7 or more jobs.

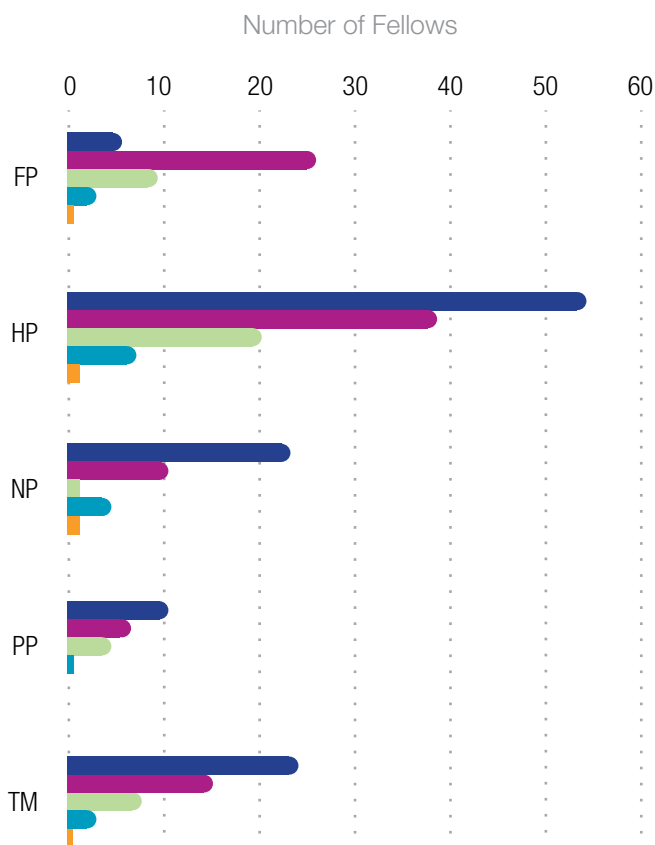
- 0
- 1-3
- 4-6
- 7-10
- >10



## For how many jobs did you formally interview?

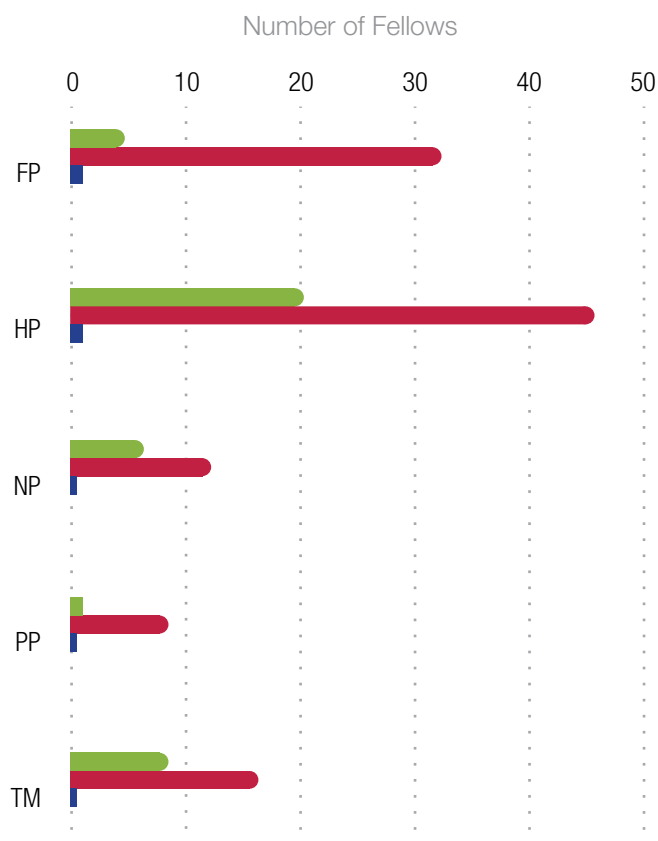
Most fellows interviewed for up to 3 positions.

- 0
- 1-3
- 4-6
- 7-10
- >10



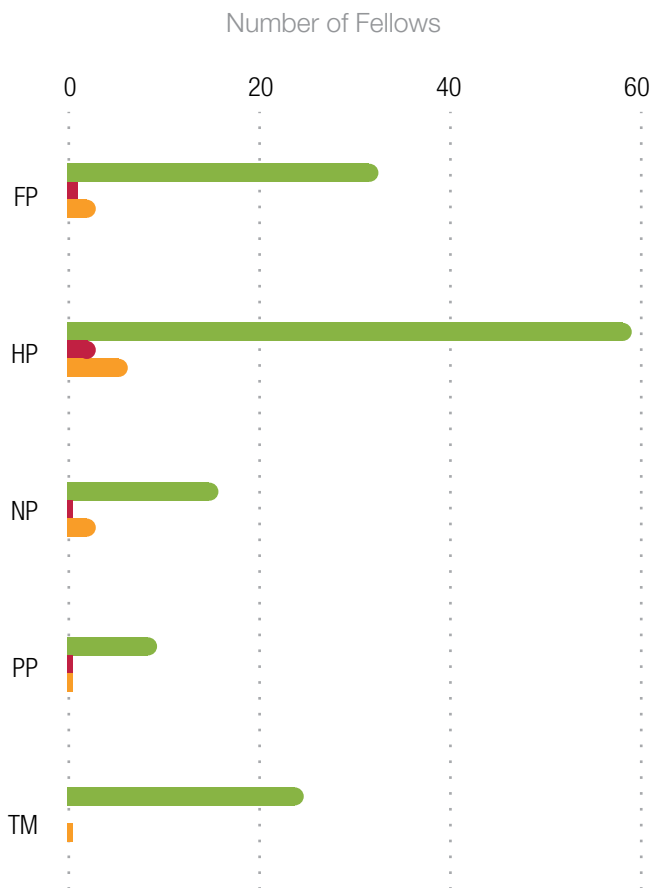
## How many job offers did you receive?

In 2017, about 10/21 of pediatric pathology, 22/40 neuropathology, 23/48 transfusion medicine, and 53/120 hematopathology fellows had not yet received job offers. It should be noted that neuropathology is a two-year program. In contrast, all but 5 of the 43 forensic pathology fellows received offers. Of fellows who received job offers, the majority received only one offer in each category.



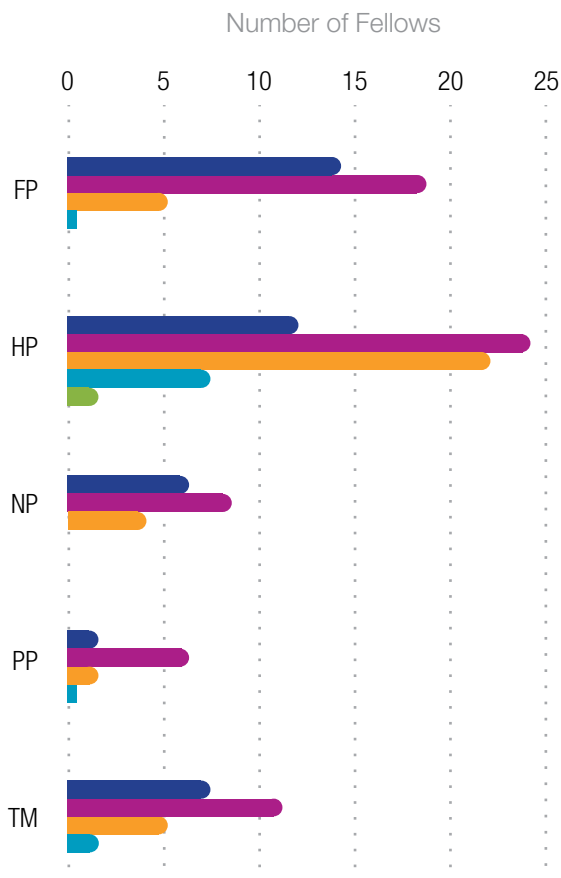
## Has it taken you longer to find a job than you expected?





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

- Yes
- No
- Not applicable

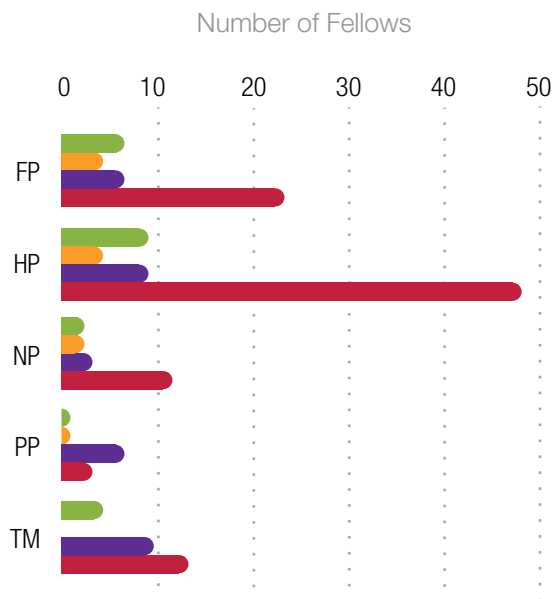


### From the time you applied, how long did it take you to receive a firm job offer?

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.

- <1 month
- 1 to 3 months
- 4 to 6 months
- 6 months to 1 year
- >1 year

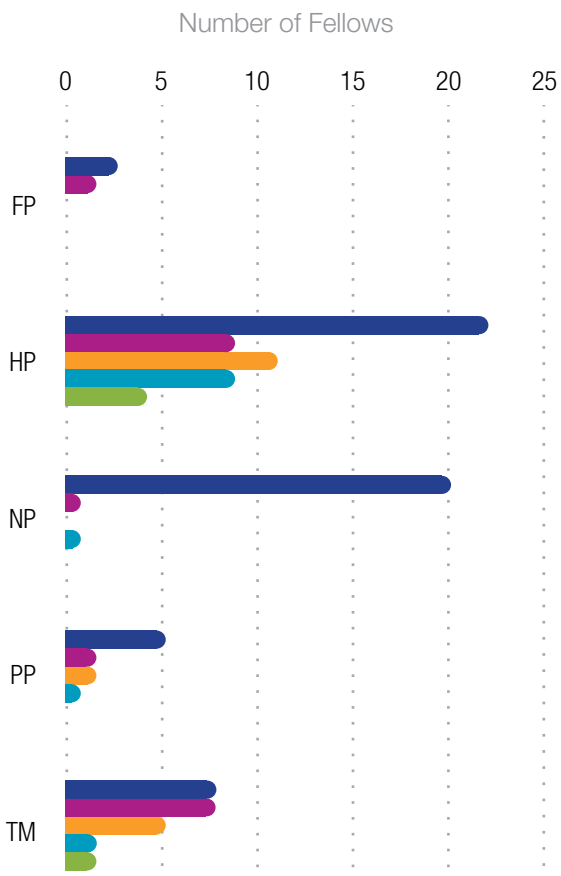




## Did you receive a job offer at your own residency or fellowship training program?

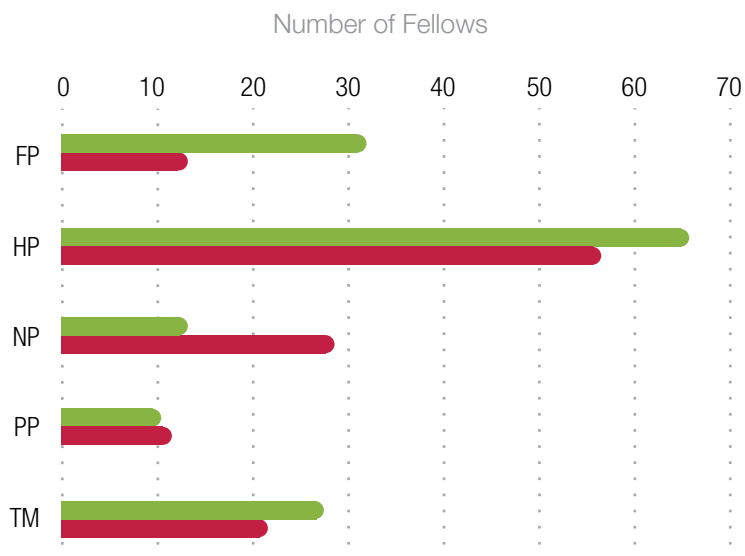
- Yes, but declined for another offer
- Yes, accepted but will keep looking in the future
- Yes, accepted and plan to stay
- No, not offered

In 2017, 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.



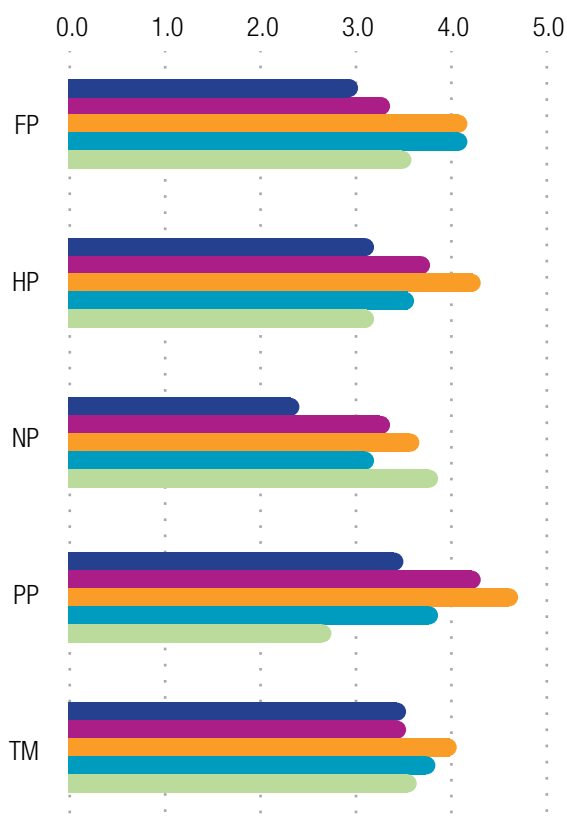
## From the time you applied, how long have you been looking for a job?

- <1 month
- 1 to 3 months
- 4 to 6 months
- 6 months to 1 year
- >1 year



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

- Yes
- No

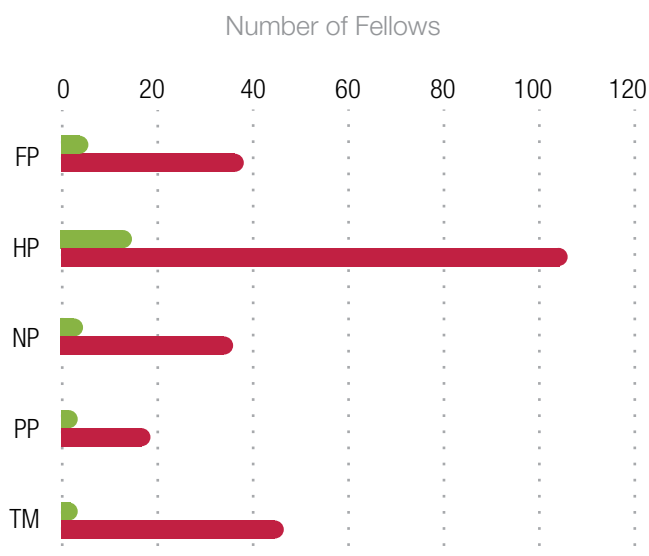


Indicate your principal reason for such a restriction.

(1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)

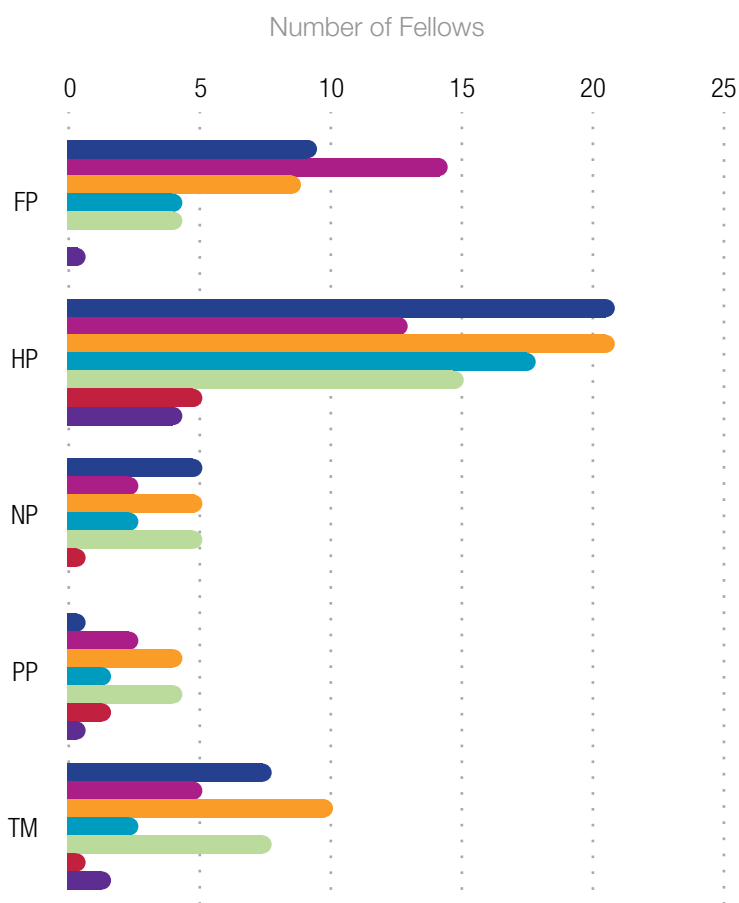
- Native to the area
- Spouse's job
- Family consideration
- Lifestyle issues (weather, culture, extracurricular activities available)
- Professional contacts in area

53% of the fellows restricted 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 11 percent of fellows restrict their job search based on their visa status.



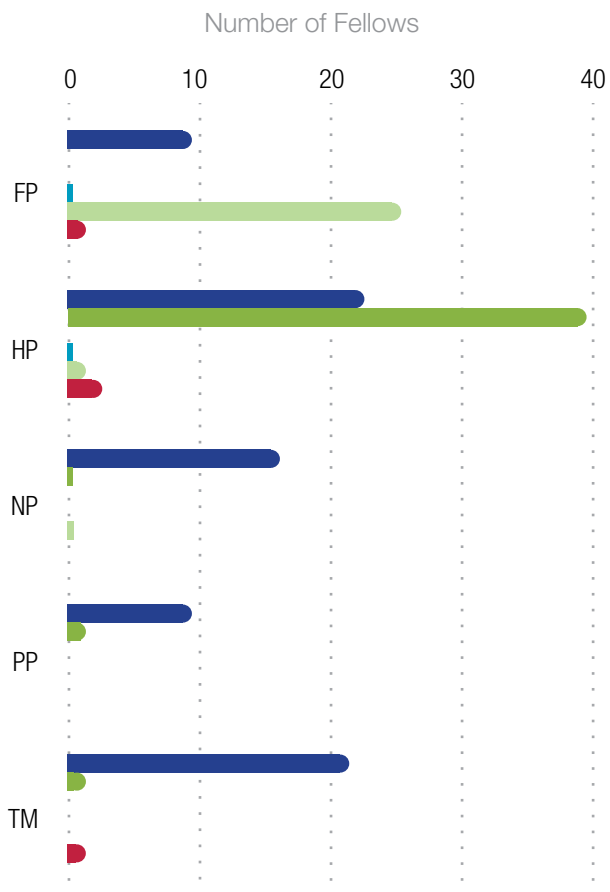
Did you restrict your job search based on your visa status?

- Yes
- No



Indicate the area to which you restricted your job search. (Select all that apply)

- Northeast US
- Southeast US
- Midwest US
- Northwest US
- Southwest US
- Canada
- Other

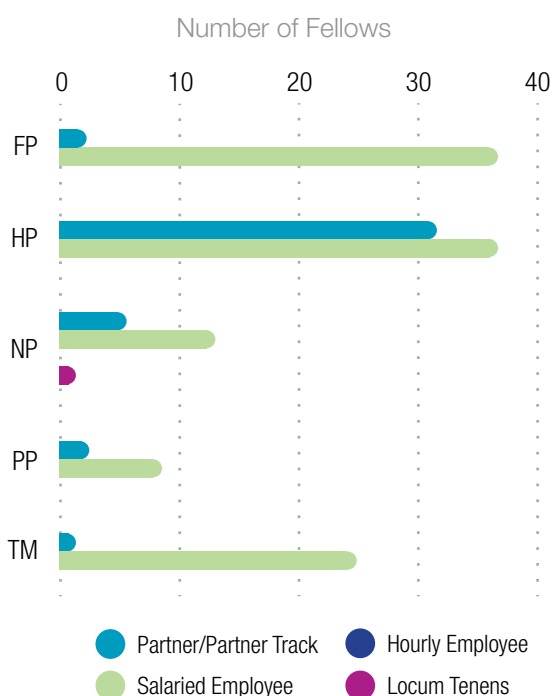


## How would you best describe your employer?

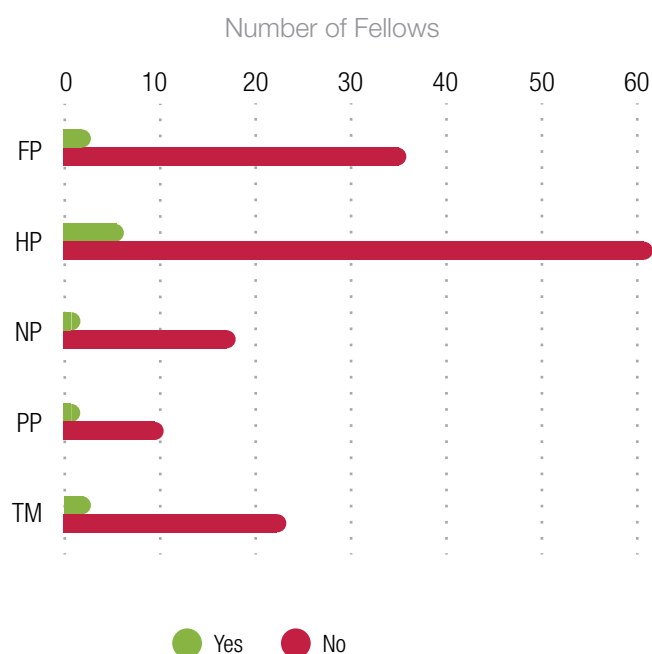
For forensics, government/military was the most frequent type of employer. For pediatric pathology, neuropathology and transfusion medicine, academic institutions were the most frequent employer. For hematopathology academic and community practices both had significant representation.

- Academic institution
- Community group practice
- Reference laboratory
- Corporate (e.g. Ameripath)
- Government/Military
- Other

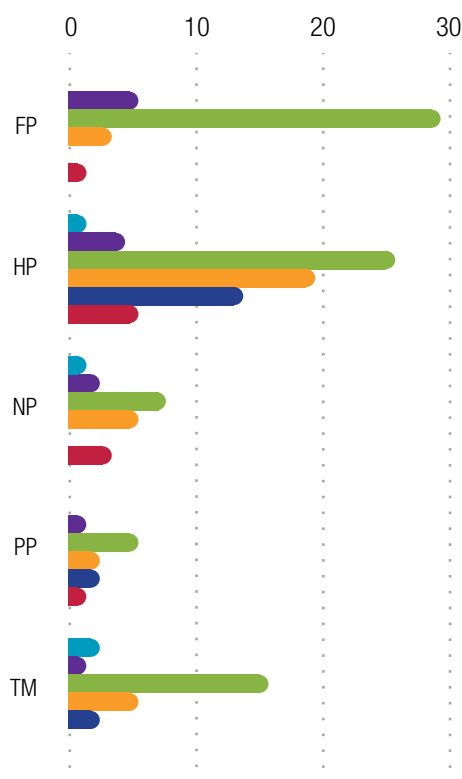
## What is your expected employment status?



## Did you accept a part-time position?

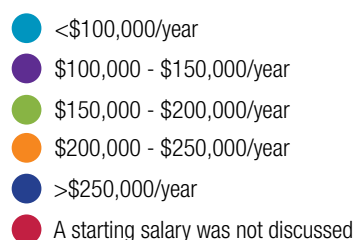


Number of Fellows



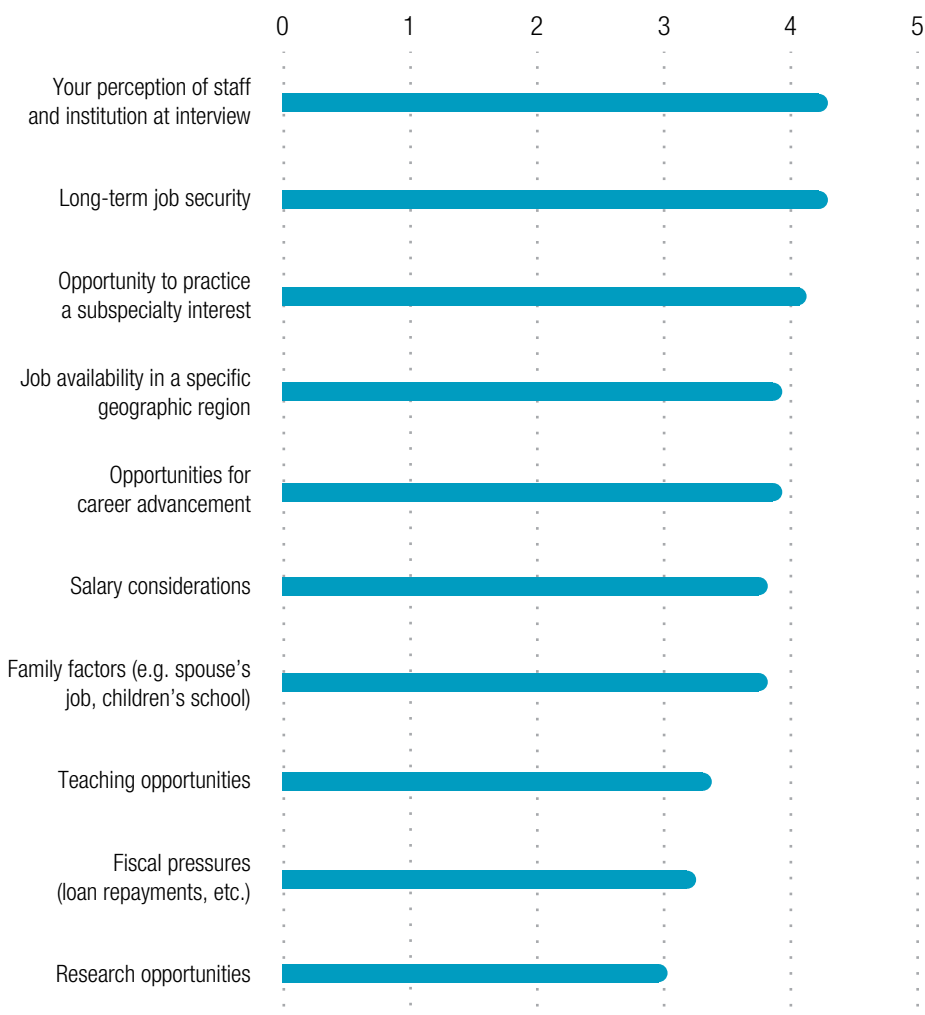
## If you received a job offer, on average, what was the starting salary offered (excluding benefits)?

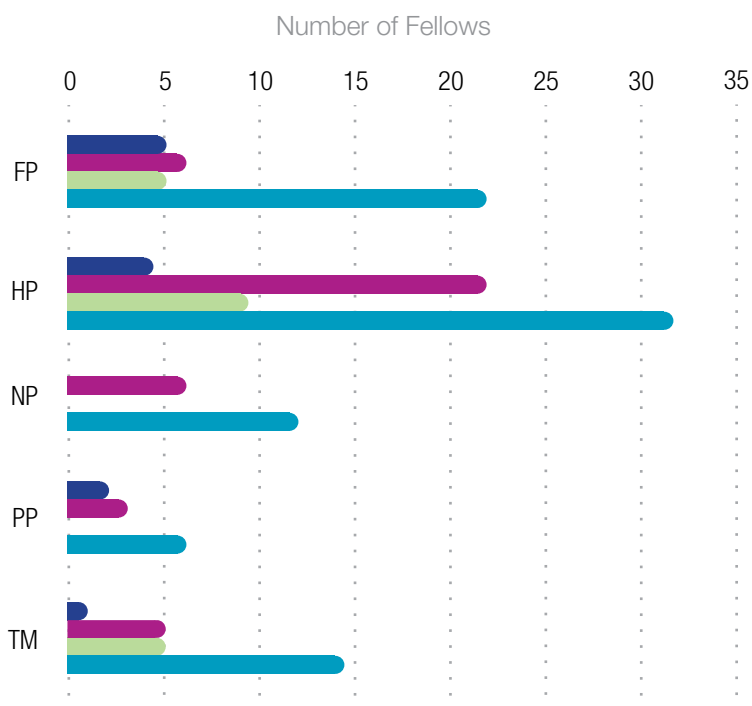
Starting annual salaries ranged widely among fellowship groups. The range of \$150,000 to \$200,000/year was the most frequent salary range reported. About 7% of fellows in various subspecialties did not discuss a salary as part of a job offer.



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

(1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)

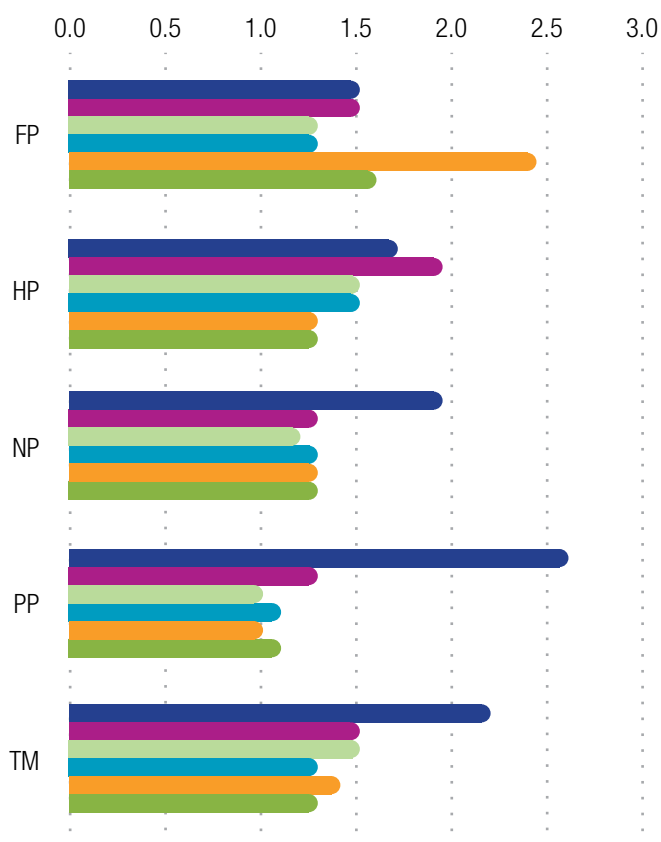




## Did you receive a bonus?

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

- Signing bonus only
- Moving bonus only
- Signing and moving bonus
- No



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

(1 = Few, 2 = Moderate, 3 = Many)

- Academic institution
- Community group practice
- Reference Laboratory
- Corporate (e.g. Ameripath)
- Government/Military
- Other

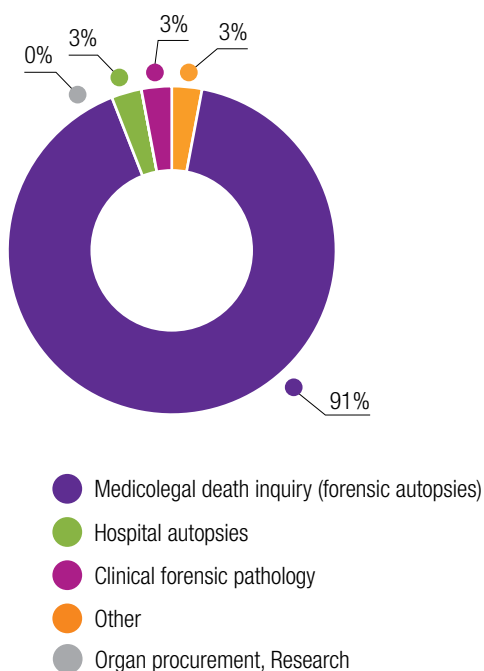
# Conclusions

56 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

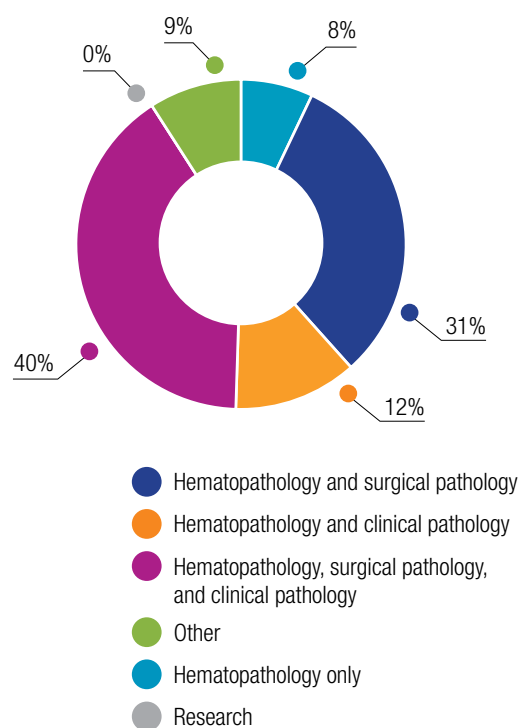
## Forensic Pathology

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



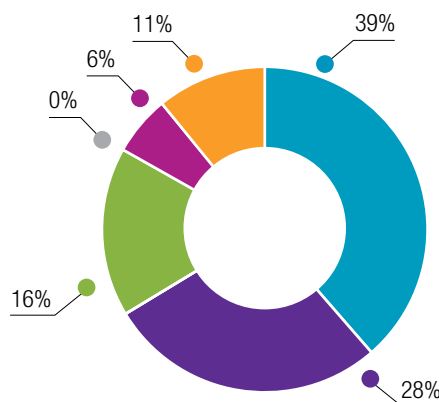
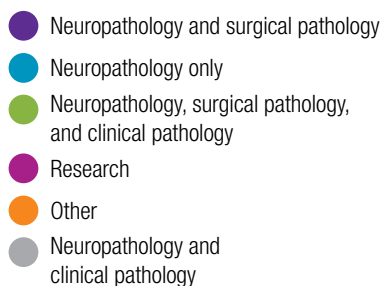
## Hematopathology

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



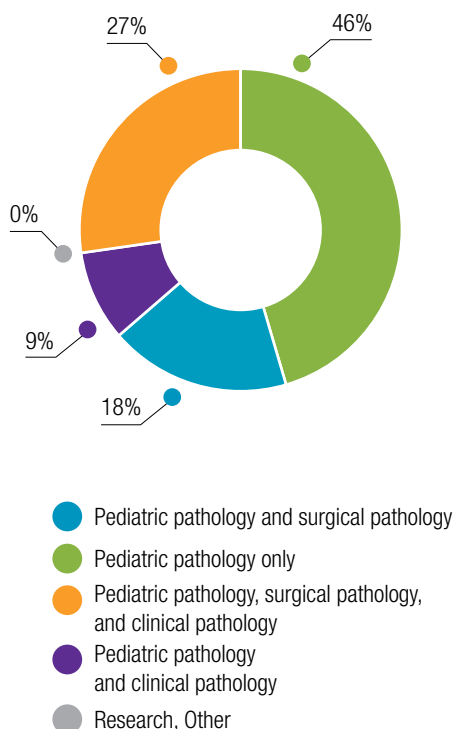
## Neuropathology

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



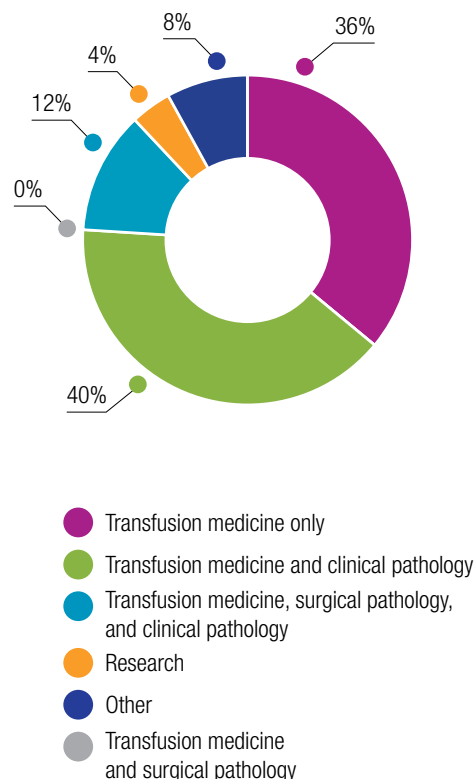
## Pediatric Pathology

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



## Transfusion Medicine

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



Fellows were surveyed about their anticipated job responsibilities. Most of the 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.

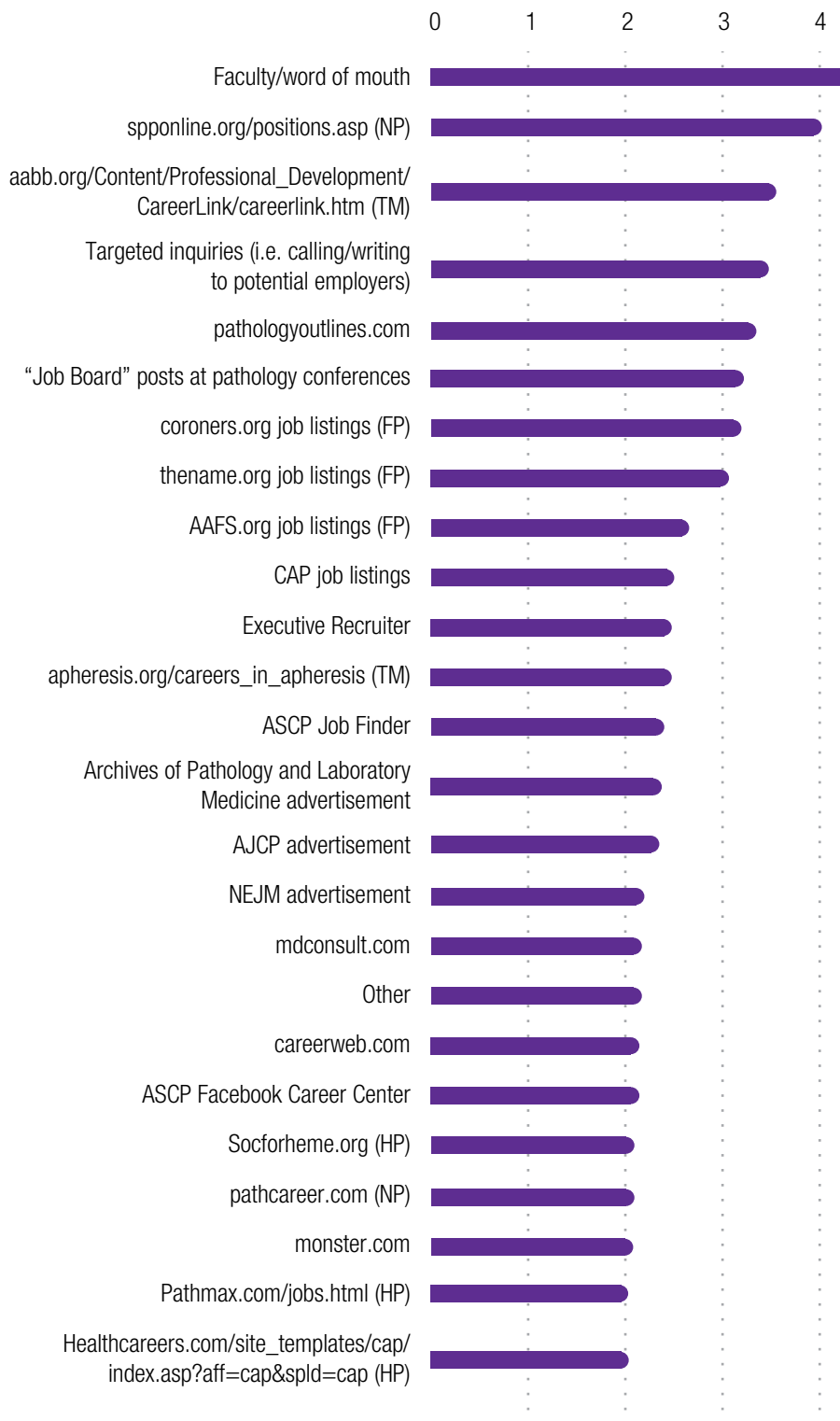
## Conclusions

- The job situation for pathology fellows is mixed, many receive one or more offers, but a substantial number of fellows are not finding employment right away. 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)

(1 = Not applicable/not a consideration, 2 = Not very important, 3 = Minor importance, 4 = Somewhat important, 5 = Extremely important)



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## ACKNOWLEDGEMENTS



The ASCP RISE Committee wishes to thank the members of the ASCP Resident Council for their dedicated input into these surveys. Moreover, this survey would not be possible without the cooperation of all pathology residency program directors and the participation of all residents and fellows who take these in-service exams and the associated surveys. We are very grateful for their assistance. Please address comments or questions about this survey to Jay Wagner at [Jay.Wagner@ascp.org](mailto:Jay.Wagner@ascp.org).

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