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Special Article

The crisis in the pathology subspecialty fellowship application process: Historical background and setting the stage

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A B S T R A C T

The process whereby pathology residents apply for fellowships for subspecialty training after residency has long been fraught with multiple problems. This paper reviews the history of the creation of such fellowships, as tied to requirements for eligibility for certification by the American Board of Pathology, going back to the inception of the Board in 1948. The problems with fellowship applications began to appear in conjunction with changes in Board requirements for basic certification, revolving around the "fifth year" or "credentialing year" requirements, and have created a situation where now residents mostly apply for fellowships while still in the second of their 4-year AP/CP residency. The pressures to apply ever-earlier, to accept offers with short intervals between offer and expiration, and how this damages programs, as well as residents, are reviewed. This paper is a companion to a larger examination of the current status of this problem, which also explores some means to ameliorate or eliminate those problems.

Keywords: Pathology fellowships, Application process, American Board of Pathology, Fifth year, Credentialing year

Introduction

In recent years the pathology subspecialty fellowship application and selection process has become increasingly problematic. Fellowship programs are soliciting and accepting applications earlier and earlier in residents' careers, such that it is now common for residents to apply after no more than 15 months of residency training. Residents have been pressured to accept fellowship offers with short deadlines or otherwise risk losing the opportunity "exploding offers".[1] On the other end, programs have seen an increasing frequency of late withdrawals from fellowships by residents who have previously committed to a fellowship position, causing the program to try to fill "unexpected openings," sometimes with scant months prior to the scheduled start of the program (usually July 1). Multiple attempts to put some standardization of application dates, to standardize application processes and forms, and to protect residents from abuse in the application process have been instituted by the Association of Pathology Chairs (APC), the College of American Pathologists (CAP), or by subspecialty pathology societies; to date, all have failed.[1–4] In this paper, we will review the various problems, provide survey results and other data from residents, program coordinators, and fellowship program directors, and suggest some approaches to solutions. We acknowledge that this is well-trod territory, but our concern is heightened because the situation continues to worsen. Our paper, and the one it accompanies, are part of a continuing effort to address these issues on the part of the Graduate Medical Education Committee of the APC. Our historical review is intended as a companion to a paper providing more recent data from residents, fellowship directors, coordinators, and residency directors, along with data about "unexpected openings" in various fellowships.[5]

A brief history of subspecialty fellowship training in pathology

While pathology had been a distinct specialty in medicine, both in Europe and North America, since the latter part of the 19th century, the American Board of Pathology was not founded until 1936.[6] This was the first, and remains, essentially, the only certification system for pathologists in the United States. (There is an Osteopathic Pathology Board, but very few pathologists, even those with DO degrees, obtain their certification through that organization instead of through the American Board of Pathology.) The Board established the requirements of training to be eligible for certification examinations leading to recognition of individuals as "board certified"; of interest in its early years, the Board also reviewed and approved residency training programs in the years prior to

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the creation of the Accreditation Council for Graduate Medical Education (ACGME). The original requirements for Board certification in both anatomic and clinical pathology included 1 year of clinical pathology (CP) residency, 2 years of anatomic pathology (AP) training, a year of clinical internship, and "a fifth year of training or practice in pathology."[6] In 1948, the Board issued revised requirements that called for 2 years of training each in AP and CP to be eligible for certification in both of these major branches of the specialty[6] with the proviso that for applicants eligible prior to July 1, 1952 a year of clinical internship could be substituted for one of these years of training, and that after that date that year had to be in CP training; a fifth year of further pathology training or actual practice was also required.[7,8] Certification for AP only or CP only then was mandated to require 3 years of training in AP or CP.

Also, in 1948, the Board first recognized that pathology as a field encompassed a range of subspecialties and authorized the creation of subspecialty certification processes, to include formal examinations. The first such recognized subspecialty for which an examination was conducted was neuropathology (NP) in 1948. This was followed by medical microbiology (1950), chemical pathology (1951), hematology (1955), forensic pathology (1959), blood banking (1973), dermatopathology (1974), radioisotope pathology (also 1974), and immunopathology (1983).[8] A complete list of pathology subspecialty fellowships that lead to ABPath certificate eligibility is listed in Table 1.[9]

Trainees interested in careers in these selected subspecialties could do fellowships in them to get extra training and qualify for the examination leading to board certification. Most pathologists did not seek such extra training over much of the history of the specialty of pathology through the 1970s.

Altered requirements for residency trigger changes in fellowships

As noted, as far back as 1938, the ABPath set rules for residency training leading to eligibility to take the basic board examinations (AP, AP/CP, CP, AP/NP) and has modified those over the years as it saw necessary. Once the ACGME was established, residency accreditation was overseen by that organization, and the Board stepped away from that function. The 2 organizations were for many years not fully congruent on training requirements: ACGME set a standard of 4 years for AP/CP and AP/NP, and 3 years for AP or CP only, matching the ABPath requirements but did not include anything about the fifth or credentialing year, including no requirement for a clinical internship. ABPath had set up a requirement for 5 years of training, including what was initially designated as the "credentialing year" of clinical internship, then later allowed that 1 of the 5 years of training might be substituted for by another year of pathology training, and then still later mandated all five years be in pathology, the "internship" year being replaced by a required year of CP residency.

By 1978, the Board requirements for eligibility for certification had changed again: for AP/CP dual certification, the requirement (for residents beginning training in 1979) was for only 4 years of training (2 years of each). It was possible to get credit for 1 year of those 4 if one had done a Post-Sophomore Fellowship in Pathology at an accredited program and to get credit for up to 1 year of research or graduate study provided that the work was closely related to pathology.[10] Similar rules were set for dual certification in AP and neuropathology, AP and forensic pathology, and AP and a single CP discipline such as blood banking.[10] Thus at least for the period 1978–1985 there was no fifth year or "credentialing year" requirement.

In 1985, the Board altered its rules yet again, bringing back the credentialing year, but allowing for different types of experience, including biomedical research (if the residency program director endorsed that experience), for clinical training (as was clearly the main intention), or for additional pathology training.[1,11] Many programs used the fifth year as a substitute for surgical pathology fellowships. By the end of the 1990s, only 16% of US pathology residents had done a clinical internship year, whereas 66% had done an extra year of pathology.[1] As noted in earlier Board rules, the 1985 rules still allowed one to get a year's credit for having done a Post-Sophomore Fellowship (PSF) in Pathology while still a medical student, if the PSF program was accredited by the ABPath (the ACGME steadfastly refused to accredit PSF programs, stressing that they oversaw only *graduate* medical education). A year in a subspecialty fellowship in a discipline that could culminate in a separate board certificate (all those listed in Table 1) could be used to qualify for AP/CP basic certification, but then could not be used for the subspecialty certification application as well; the ABPath would not allow "double-dipping."

Many of the fellowships that were started or expanded to deal with this increased demand for the fifth year of training were in general surgical pathology. Some programs elected for ACGME accreditation of their surgical pathology programs as "Selective Pathology," a category originally intended to encompass subspecialty areas not leading to formal board certification, such as gynecological pathology, gastrointestinal pathology, or bone pathology.[3] Many program directors found the bureaucratic processes for seeking accreditation of a "new" fellowship more onerous than the consequent "rewards" of such accreditation, and so many of these fellowships were not accredited; as long as they were attached to accredited residencies, the ABPath accepted these "fifth-year" experiences for qualification for the AP/CP examinations. However, as nonaccredited fellowships, the trainees were not eligible for full federal government support to their institutions for their salaries.

There was continued dissatisfaction with the lack of agreement on training requirements between the ABPath and the ACGME, and so further revisions were made in 2001. The ABPath ended its accreditation of PSF programs, and mandated 4 years of training for AP/CP and AP/NP, and 3 for AP or CP only, without any requirement for a fifth year of training, clinical or otherwise. The ABPath and ACGME agreed to standardize fellowship programs to 1-year duration, but the NP programs and societies objected vigorously, and as a result, the NP fellowships were allowed to remain as 2-year programs, the sole exception to the 1-year guideline. All training leading to pathology certificates had to be in pathology, with limited exceptions for research (no more than 6 months during a 4-year AP/CP program) and for patient-facing clinical experiences (usually no more than 1 month).[12] (More recently, the ABPath has created a "physician-scientist" track allowing for up to 18 months of research time within the 4 years of AP/CP training).[13]

One reaction to this was led by the Association of Directors of Anatomic and Surgical Pathology (ADASP). ADASP leaders had become

Table 1
Subspecialty programs with ABPath certification.[a]

Subspecialty	Year First Certificates Issued	Year Terminated
Blood banking/transfusion medicine	1973	
Clinical informatics[b]	2013	
Cytopathology	1989	
Dermatopathology[c]	1974	
Hematopathology	1955	
Neuropathology	1948	
Pathology-chemical	1951	
Pathology-forensic	1959	
Pathology-medical microbiology	1950	
Pathology-molecular genetic[d]	2001	
Pathology-pediatric	1990	
Immunopathology	1983	1997
Radioisotope pathology	1974	1983

[a] Source: ABMS Board Certification Report 2019–2020, American Board of Medical Specialties.[9]
[b] Joint administration by ABPath and the American Board of Preventive Medicine.
[c] Joint administration by ABPath and the American Board of Dermatology.
[d] Joint administration by ABPath and the American Board of Medical Genetics and Genomics.

convinced that because a large proportion of pathology residents did a fifth-year surgical pathology "fellowship," a 4-year AP/CP program was insufficient to prepare a pathologist for independent practice, especially in surgical pathology. This sentiment was widely disseminated at national pathology meetings, although unpublished. Nevertheless, the academic "market" as largely controlled by members of ADASP operated such that no pathologist, even if Board-certified, would be hired as an academic surgical pathologist without a fellowship after residency.[13] This caused an even greater demand for fellowships.

At the same time, following general trends in medicine, pathology was becoming more and more subspecialized. In part, this was driven by subspecialized clinicians who wished the specimens from their patients to be examined and diagnosed only by similarly subspecialized pathologists. This trend was greater at academic medical centers but also occurred in the community and private practice groups. There had already been many fellowships created by individual institutions for subspecialty training that did not lead to a separate board certificate, and often these programs were not ACGME accredited. Long-standing fellowship programs included gastrointestinal pathology, gynecologic pathology, bone and soft tissue pathology, and more. Some of these became officially accredited by the ACGME as selective pathology fellowships, but many still do not lead to board certification. In some cases, subspecialty societies organized to seek such recognition (e.g., pediatric pathology, not an official ABPath-subspecialty until the first examination in the subspecialty in 1990).

Subspecialization adds to the drive for more and different fellowships

Given the growing demand for subspecialists by larger private practice groups and most academic pathology departments, there has been an increasing demand for most types of pathology fellowships[1] In the past, most residents could go on to employment as attending pathologists right after residency (admittedly some with 5 years of training, including a credentialing year or fifth-year surgical pathology fellowship[3]). During the late 1980s and 1990s, increasing proportions of US pathology residents sought fellowships.[12–18] In fact, in recent years, many residents do 2 or more fellowships, motivated to make themselves more "marketable" in what has been perceived at times as a tight job market.[14–20] The American Society for Clinical Pathology (ASCP) annually surveys residents concomitant with the annual Resident In-Service Examination (RISE). In the 2013 survey, 38% of residents reported plans to do 2 or more fellowships[15]; in 2014, this rose to 40%,[16] in 2016[17] and again in 2018 it was 45%,[18] in 2019 it was 46%,[19] and in the most recent report it was again 45%.[20]

This trend has created a greater sense of competition for the fellowships deemed more "desirable," either because of the prestige of a particular institution or because that subspecialty is thought to be more "marketable." Fellowships in dermatopathology, hematopathology, and GI pathology have become particularly competitive, particularly at prestigious institutions hosting such programs. Surgical pathology fellowships remain the most popular choice (followed by cytopathology and then by hematopathology),[18] and these reproduce the "fifth-year" surgical pathology experiences that grew from the initial reaction to the discontinuation of the credentialing year requirement.

Competition among programs and among applicants generates multiple problems

As the demand increased, the subspecialty program directors perceived that they were in competition with each other to get the "best" fellows. (Our perception, having lived through this time as program directors, is that this was driven first by the larger and more prestigious academic pathology departments, but this is impossible to document.) Not all fellowship programs in every subspecialty filled all of their positions in any given year, further increasing the sense of competition among program directors to attract and contractually tie up "the best" residents as soon as possible. Applications, interviewing, and offers were made progressively earlier each year. This picture was further complicated by the fact that many fellowship programs recruit from their own parent residency program. The competitive nature of the fellowship hiring process among programs has produced an application "season" that has moved from the middle part of a resident's third year of a 4-year program to the current situation with residents compelled to begin applying in their second year of training. Many residents report being told they must apply in the spring of their PGY2 year, after only 18–20 months of AP/CP training, if they are going to get a "good fellowship." This forces residents to choose a fellowship before many have been exposed to some areas of subspecialty pathology and encourages applications for 2 different fellowships to assure that one gets to train in areas of interest. It also encourages applications to greater numbers of fellowship programs within each subspecialty as residents perceive a need to maximize their chances of obtaining a "good" fellowship position in their desired subspecialty.

Two additional problems derive from this situation. First, some fellowship programs have exhibited coercive behavior toward resident applicants, offering a position with an acceptance deadline as short as 1 or 2 days or losing the offer; a week has become relatively common. The evidence for this is largely anecdotal, and those residents who have experienced this are sometimes reluctant to complain openly about it, so this is likely underreported. The problem with these "exploding offers"[2] is that they coerce residents who have no power in such situations. The origin of the National Resident Matching Program was, in significant part, because of a drive to force residency programs to behave more ethically and not coerce medical student applicants. These ethical considerations surrounding the behavior of fellowship program directors have been discussed previously.[3,4]

The second problem is that forcing an early fellowship commitment has led to situations in which residents get other offers later in their residency before the fellowship starts. Some of those offers are for jobs as attending pathologists (more common with second fellowship commitments than first), but many are for other fellowships, frequently in different subspecialties. Either situation puts the resident in an ethical dilemma: do they renege on a commitment to a program, often after they have actually signed a contract, or continue with a fellowship they no longer desire (or desire less than their other options)? Residency program directors are divided as to how to advise their residents in such situations, considering that the initial "coercion" to commit to a fellowship while a PGY2 could be considered potentially unethical in the first place, so is withdrawing for a (perceived) better fellowship unprofessional or unethical?

In light of these multiple interrelated problems, there have been several efforts to remedy at least some of them. The CAP promulgated a uniform fellowship application form, developed by the CAP Residents' Forum, but its use is quite inconsistent.[1] The APC, acting on the belief that fellowship programs (with the exception of some forensic pathology and transfusion medicine programs) were ultimately subject to the authority of their institutional chairs of pathology, tried on more than one occasion to institute a fellowship match, either across all pathology disciplines or as proof-of-principle one or a few selected subspecialty areas.[1–4,7] It also tried to get agreements that programs would not commit to applicants, or insist on applicants committing to a fellowship position, prior to some established point in residency training, often after 24 months or more of training[1,2,4]; this included a proposal for a "Code of Conduct" for Fellowship Program Directors, but this was never adopted.[4]

These efforts mostly have failed; few programs use the standard application form, and most fail to adhere to a common fellowship recruitment calendar. No proposed pathology fellowship match has yet been attempted, although forensic pathology programs have agreed to a match for the 2021–2022 application season. In the last 2 years, first dermatopathology and then in 2021 cytopathology have attempted to

put in place voluntary uniform timelines, with applications to be reviewed only beginning after July 1, 2 years prior to when the fellowship is to start (thus essentially at the start of the PGY3 year for AP/CP residents), with interviews to be scheduled only after August 15 of that year, and no offers to be made prior to October 1 of that year. There are some exceptions for internal candidates, and both subspecialties have set a 72 h time limit for a resident to accept or reject an offer of a fellowship position when offered initially on the October 1 date (and 24 h for subsequent offers at later dates). Not all programs in these subspecialties have agreed to adhere to this, although the major subspecialty organizations have brokered these agreements. We will eagerly await the outcomes of these attempts and of the forensic fellowship match.

These three exceptions aside, the end result is that we have a system that causes great anxiety for our residents, frustration for those fellowship programs who do adhere to a later recruitment season, and a progressive escalation in "unexpected openings" during the months before the fellowship start date. These openings create a great deal of extra work for the fellowship program coordinators and fellowship directors and may leave some positions unfilled.

In the companion paper we and our colleagues from the Graduate Medical Education Committee of the APC will present data relevant to these problems, and will offer perspectives from the points of view of residents, fellowship directors, and program coordinators. We strongly believe that the academic pathology community must come together to solve this problem.

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