Regular Article

# Gender differences in appointments to pathology department interim chair positions and subsequent advancement to permanent chair positions 

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 males, although the reasons for this difference could not be determined.

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## Introduction

The Association of American Medical Colleges has reported that although females and males graduate in equal numbers from medical school and females are well-represented as junior faculty in academic medical centers, there is gender disparity at the associate and full professor level, and even more so at the chair level. ${ }^{1}$ Studies are needed to identify ways this gender disparity can be corrected. In a previous publication about female chairs of pathology, we reported that females made up $31 \%$ of the total 166 Association of Pathology Chairs (APC) department chairs, although at that time females constituted $43 \%$ of faculty in academic departments of pathology. ${ }^{2}$ In a survey of these female chairs administered in September 2020 to determine what facilitated or hampered their career advancement, we reported that previous
leadership roles were important. ${ }^{2}$ We also reported that of 18 interim chairs at that time, $65 \%$ were females. Furthermore, $35 \%$ of responding permanent female chairs had been interim chairs at their institutions before becoming the permanent chair. These latter two findings suggested that serving as an interim chair might be a common pathway for females to become permanent chairs, although the high percentage of female interim chairs at that time created some uncertainty as to how often the interim position led to becoming the permanent chair.

Using the APC database, the authors identified all male and female interim chairs of departments of pathology from January 2016 to May 2022. We asked how many male compared to female interim chairs became permanent chairs. We then surveyed this cohort of interim chairs to determine the reasons: (1) when asked to serve, they accepted the appointments as interim chairs and (2) if a national search was held, they

[^0]subsequently did or did not choose to become a candidate for the permanent chair. The goal was to understand whether there might be gender differences in these reasons that could explain any differences that we might find in the percent of female vs male interim chairs that subsequently became permanent chairs.

## Materials and methods

The APC is a professional organization of academic departments of pathology in the United States and Canada. The names of all interim and permanent chairs of Departments of Pathology who served from January 2016 to June 2022 as well as their dates of appointment are available in the APC database. After approval of the study by the Leadership Development and Diversity Committee and the Council of the APC, this information was made available to 3 members of the study team (MFL, NJ, MM). In some cases, the public website of the interim chair's institution was used to confirm gender. A survey was sent via email to all individuals who served as interim chairs during the dates indicated above. The University of New Mexico Institutional Review Board indicated that the research was an exempt study.

## Results

From January 2016 to June 2022, 50 individuals served as interim chairs in departments of pathology. The interim chairs were $66 \%$ male and $34 \%$ female (Table 1). Almost half of the females (47\%) appointed as interim chairs were permanent chairs in June 2022 at the end of our study, whereas only $24 \%$ of males were permanent chairs. One additional male interim chair served for a short time as a permanent chair after his role as interim chair, but at the time he responded to the survey was no longer a permanent chair. Therefore, when including this short-term permanent chair, $27 \%$ of male interim chairs became permanent chairs. Importantly, although more males than females were appointed as interim chairs, females were more likely to become permanent chairs after accepting the interim position during the time frame of our study. Almost half (42\%) of males who had become interim chairs were still interim chairs, while $33 \%$ were neither interim nor permanent chairs. Only $18 \%$ of females continued as interim chairs while $35 \%$ of females were neither interim nor permanent chairs.

A survey was sent to all 50 interim chairs. Slightly less than half of the 50 interim chairs (24/50, 48\%) responded, including 12 of 17 ( $71 \%$ ) females and 12 of 33 ( $36 \%$ ) males. Of the three groups of interim chairs, the highest response rate was among females who had become permanent chairs $(8 / 8,100 \%)$. The highest response rate for males also fell in the current permanent chair category (4/8, 50\%). Among females who

Table 1
Current position and gender of all pathology interim chairs from January 2016 through June 2022.

| Current Position | Males | \% of <br> Males | Females | \% of Females | Total | \% of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interim Chair | 14 | 42\% | 3 | 18\% | 17 | 34\% |
| Permanent Chair | $8^{\text {a }}$ | 24\% ${ }^{\text {a }}$ | 8 | 47\% | 16 | 32\% |
| Not in either chair position | 11 | 33\% | 6 | 35\% | 17 | 34\% |
| Totals | $33^{\text {b }}$ | 100\% ${ }^{\text {c }}$ | $17^{\text {b }}$ | 100\% | 50 | 100\% |

${ }^{\text {a }}$ One interim chair applied for and was appointed permanent chair but is no longer either a permanent or an interim chair. He is counted as not being in either chair position in this table. However, if one considered all males who were interim chairs who became permanent chairs whether during the period under study, the percent of males achieving permanent chair positions would rise from $24 \%$ to $27 \%$.
${ }^{\text {b }}$ During the time shown, $66 \%$ of appointed interim chairs of pathology departments were male and $34 \%$ were female.
${ }^{c}$ Rounding of the percent in this column resulted in a total percent of less than $100 \%$.
are still interim chairs, 2 of 3 (67\%) responded while only 3 of 14 (21\%) male interim chairs responded. Among those no longer interim or permanent chairs, 2 of 6 females ( $33 \%$ ) responded, while 5 of 11 males (45\%) responded. Although the overall response rate to the survey was less than $50 \%$, the strong response rate among females who served as interim chairs and subsequently became permanent chairs suggests that their survey answers may be particularly instructive in understanding the value of the interim chair position for the career progression to permanent chair for females. Because of the apparent gender bias in all three categories (still interim chair, now permanent chair, no longer interim or permanent chair responses), valid gender comparisons could not be made.

Table 2 shows demographics and additional data for the 24 survey respondents and their institutions. While most male and female interim chairs were Caucasian from allopathic US/Canadian medical schools, several belonged to other racial and ethnic groups and/or were international graduates. All but one woman and all males reported having previous leadership experience before being appointed as interim chair. Two males had previously been permanent chairs. Males who were appointed as interim chairs were significantly older ( 59.2 years) than females ( 50.4 years). Both males and females served similar terms (average 20 months for males as compared to 24 months for females, difference not significant by Students t -test, $\mathrm{p}=.51$ ). The majority of males and females were asked to serve as interim chairs without previously expressing an interest in the position. One male and three of the four remaining females were asked to express their interest in being considered among at least one other possible candidate. One woman had expressed an earlier interest in the position, and one man had been identified in a succession plan as the interim chair after the permanent chair left their position. Appointments for the position of interim chair were predominantly made in similar percentages for both males and females by the Dean or the Dean together with one or two others.

The respondents were asked to identify from a list their 3 most important reasons for accepting the position of interim chair. An "other" category was listed and the respondents were asked to list up to three reasons not available in the list of choices if they could not find appropriate choices among any of those offered. Table 3 shows the responses. The number of respondents who chose a specific answer is shown on the left within each column. We also show on the right within each column how often an answer was chosen and shown as a percentage of total answers chosen. Although the number of respondents in our survey was too small to detect significant gender differences, it appeared that there was general agreement on important reasons. All females (12/12) and most males (10/12) identified a desire to support the faculty, staff, and trainees during the transition to a new permanent chair. Females $(10 / 12)$ identified assuring a smooth operational transition between the former permanent chair and the new permanent chair as their second most frequent choice. For males, assuring a smooth transition and having a desire to set a short-term strategic plan were equally frequent choices (6/ 12). Females equally selected "setting a short-term strategic plan" and "becoming a chair was a long-term goal, and it was an opportunity to learn what being a chair entailed" (4/12 for each). Only 2 of 12 males chose this latter reason. In contrast, males identified their fourth most frequent choice that "although becoming a chair was NOT a long-term goal, it was an opportunity to learn what being a chair entailed" (4/ 12). Three of 12 females also chose this option. Three male interim chairs listed three "other" reasons for accepting the interim chair position (identified in the footnote of Table 3), while females apparently felt the choices offered expressed their reasons.

We asked whether a national search was initiated during the interim chair's tenure and, if so, did they apply. Of the 24 institutions, 15 initiated a search (Table 4). Notably, a national search was done in 10 of 12 institutions where males were appointed as interim chairs, compared to only 5 of 12 institutions where females were interim chairs. Of the 15 institutions that initiated national searches for the permanent chair position, 5 males and 3 female interim chairs applied for the position.

Table 2
Demographics of interim chairs who responded to survey.

| Survey Data Issue | Males | \% of Males ${ }^{\text {a }}$ | Females | \% of Females ${ }^{\text {a }}$ | Total | \% of Total ${ }^{\text {a }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current position |  |  |  |  |  |  |
| Continuing interim chair | 3 | 25 | 2 | 17 | 5 | 21 |
| Permanent chair | 4 | 33 | 8 | 67 | 12 | 50 |
| Neither interim nor permanent | 5 | 42 | 2 | 17 | 7 | 29 |
| Totals | 12 | 100 | 12 | 100 | 24 | 100 |
| Medical school of graduation |  |  |  |  |  |  |
| Allopathic US/CA | 8 | 67 | 10 | 83 | 18 | 75 |
| Osteopathic US/CA | 0 | 0 | 1 | 8 | 1 | 4 |
| International non-US/CA | 4 | 33 | 1 | 8 | 5 | 21 |
| Totals | 12 | 100 | 12 | 100 | 24 | 100 |
| Average age when appointed interim chair | $59.2{ }^{\text {b }}$ |  | $50.4{ }^{\text {b }}$ |  | 54.6 |  |
| Racial/Ethnic group |  |  |  |  |  |  |
| Asian/Pacific Islander | 3 | 25 | 0 | 0 | 3 | 13 |
| Black/African American | 0 | 0 | 1 | 8 | 1 | 4 |
| Hispanic/Latinx | 0 | 0 | 1 | 8 | 1 | 4 |
| White/Caucasian | 8 | 67 | 10 | 83 | 18 | 75 |
| Other | 1 | 8 | 0 | 0 | 1 | 4 |
| Totals | 12 | 100 | 12 | 100 | 24 | 100 |
| Held leadership positions prior to appointment as interim chair | 12 | 100 | 11 | 92 | 23 | 96 |
| Appointment mechanism |  |  |  |  |  |  |
| Was asked to serve without initially indicating interest | 10 | 83 | 8 | 67 | 18 | 75 |
| Was asked to be one of more than one candidate for position | 1 | 8 | 3 | 25 | 4 | 17 |
| Had previously indicated interest before appointment made | 0 | 0 | 1 | 8 | 1 | 4 |
| Other | $1{ }^{\text {c }}$ |  | 0 | 0 | 1 | 4 |
| Totals | 12 | 100 | 12 | 100 | 24 | 100 |
| Appointment made by |  |  |  |  |  |  |
| Dean | 5 | 42 | 6 | 50 | 11 | 46 |
| Dean +1 or 2 others ${ }^{\text {d }}$ | 5 | 42 | 5 | 42 | 10 | 42 |
| Other | $2{ }^{\text {e }}$ | 17 | $1{ }^{\text {f }}$ | 8 | 3 | 13 |
| Total | 12 | $100^{\text {a }}$ | 12 | 100 | 24 | $100^{\text {a }}$ |
| Average months as interim chair | $20^{\text {g }}$ |  | $24^{8}$ |  | 22 |  |

${ }^{\text {a }}$ Rounding of the percentages in each category sometimes resulted in a total percent in the rows slightly above or slightly less than $100 \%$ but $100 \%$ was used for clarity.
${ }^{\text {b }}$ Only $11 / 12$ males indicated their age at the time of appointment to interim chair. The difference in average age between males and females appointed as interim chairs was significant by Student's t-test: $p=.02$. Median age at interim chair appointment: males: 61 years; females: 52.5 years.
${ }^{c}$ One male interim chair had been previously identified as the interim chair as part of a routine succession plan.
${ }^{\mathrm{d}}$ Others included primarily CEO of Healthcare System (9 cases), former chair (2), Vice Chancellor for Health Affairs (1).
e Dean of Academic Affairs, CEO.
${ }^{f}$ Executive Dean.
g The difference in average months served as interim chairs was not significantly different between males and females by Student's t -test: $\mathrm{p}=.51$.

Although national searches occurred more often in institutions where males were interim chairs, the percent of males who applied for these positions was slightly less than for females ( $50 \%$ of males, $60 \%$ females, Table 4). The three top reasons for applying for the position are also shown in Table 4. Two of the 3 females chose (1) experience as an interim chair added to qualifications, (2) enjoyed the role of supporting the faculty, staff, and trainees, and (3) desire to build a stronger faculty. Males (3/5) chose wanting to help set long-term strategic direction for the department most often, but 2 of 5 males also chose the same three reasons for applying for the permanent chair position as 2 of 3 females. Of the 5 male interim chairs who applied for the permanent position, 4 were chosen after a single search. Of the 3 female interim chairs who applied for the permanent position, 2 were chosen, 1 after a single search, and 1 after more than 1 search. Notably, in two institutions following a failed search in which the interim chairs did not apply, the interim chairs were subsequently appointed as the permanent chairs ( 1 male and 1 female).

We asked the 7 ( 5 male and 2 female) interim chairs who did not apply for the permanent chair position to identify from a list what their reasons were (Table 5). Two additional interim chairs ( 1 male, 1 female) completed this survey question although their institutions did not initiate a search because they indicated that they did not intend to apply if a search was initiated. Their answers are included as contributing to understanding the reasons that a person serving as an interim chair might not desire and, therefore, would not apply for the permanent chair position. Common male choices were (1) it was never their intent to become a permanent chair and serving as an interim chair did not change their mind and (2) their former duties were more gratifying professionally
than the administrative role of chair. A common choice for both males and females was in the "other" category: one male wrote that he had accomplished what he wished to do already; one male and one female wrote they did not meet the qualifications for chair; one male wrote that he had concerns about the leadership to whom he would report; one female wrote that she felt it was too late in her career to take on the permanent chair position. Despite not applying for the position and responding to this survey question, 2 interim chairs in institutions where a national search was held ( 1 male and 1 female) were subsequently appointed to permanent chair positions.

Although 15 institutions had national searches for the permanent pathology chair positions, 9 did not. One question asked the status of the chair position in these institutions (Table 6). Notably, in 5 of the institutions where females had been interim chairs, they were appointed to the permanent position without a search. Of the final 4 departments where no search was initiated, in 3 , the interim chairs ( 1 male, 2 female) had continued in their roles and in one, a new interim chair had succeeded the initial one (both males). An open text question asked the respondents to speculate on why a search had not been initiated. In the two institutions in which males were interim chairs, one respondent wrote that a search would be held in a few years, and another indicated that there was no current plan for a search. Of the 7 institutions that did not initiate a national search where females were interim chairs, 1 respondent wrote there was no current plan for a search likely because there were many vacant chair positions in departments that were larger than the pathology department, and 1 respondent speculated that the permanent chair position would be advertised after some administrative

Table 3
Top three reasons for accepting appointment as an interim chair.

| Top three reasons for accepting interim chair appointment ( $\mathrm{N}=12$ males, 12 females) | Males | \% of Choices ${ }^{\text {a }}$ | Females | \% of Choices ${ }^{\text {a }}$ | Total | \% of Choices ${ }^{\text {a }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assure a smooth operational transition between the former permanent chair and the new permanent chair | 6 | 18\% | 10 | 28\% | 16 | 23\% |
| Support the faculty, staff, and trainees during the transition | 10 | 29\% | 12 | 33\% | 22 | 31\% |
| Becoming a chair was a long-term goal, and it was an opportunity to learn what being a chair entailed | 2 | 6\% | 4 | 11\% | 6 | 9\% |
| Although becoming a chair was NOT a long-term goal, it was an opportunity to learn what being a chair entailed | 4 | 12\% | 3 | 8\% | 7 | 10\% |
| Set a short-term strategic direction of department | 6 | 18\% | 4 | 11\% | 10 | 14\% |
| Develop new programs within the department | 1 | 3\% | 0 | 0\% | 1 | 1\% |
| Make decisions about faculty hires | 1 | 3\% | 0 | 0\% | 1 | 1\% |
| Interact with other institutional leadership in advancing the institution | 1 | 3\% | 3 | 8\% | 4 | 6\% |
| Manage department finances | 0 | 0\% | 0 | 0\% | 0 | 0\% |
| Other ${ }^{\text {b }}$ | 3 | 9\% | 0 | 0\% | 3 | 4\% |
| Totals ${ }^{\text {c }}$ | 34 | 100\% | 36 | 100\% | 70 | 100\% |

${ }^{\text {a }}$ Rounding to whole numbers in these columns resulted in less than a total of $100 \%$.
${ }^{\mathrm{b}}$ Three respondents listed one reason in the "Other" category (1) specific request of other pathologists, laboratory and hospital executives, (2) "lead a departmental transformation", and (3) "the department was in crisis and I was the most experienced".
${ }^{\text {c }}$ One male respondent chose only one reason, explaining the discrepancy in total choices between the 12 male and 12 female respondents.

Table 4
Prevalence of national searches and reasons for applying for the permanent chair pposition.

| Survey Question | Males | \% of Males | Females | \% of Females | Total | \% of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Was there a national search initiated while you were an interim chair? |  |  |  |  |  |  |
| Yes | 10 | 83\% | 5 | 42\% | 15 | 63\% |
| No | 2 | 17\% | 7 | 58\% | 9 | 38\% |
| Total | 12 | 100\% | 12 | 100\% | 24 | 100\% ${ }^{\text {a }}$ |
| If there was a national search, did you apply for the permanent chair position while serving as interim chair? | Males | \% of Males | Females | \% of Females | Total | \% of Total |
| Yes | 5 | 50\% | 3 | 60\% | 8 | 53\% |
| No | 5 | 50\% | 2 | 40\% | 7 | 47\% |
| Total | 10 | 100\% | 5 | 100\% | 15 | 100\% |
| Top three reasons for applying for a permanent chair position. $\mathrm{N}=8$ ( 5 males, 3 females) | Males | \% of Reasons | Females | \% of Reasons | Total | \% of Reasons |
| It was my original goal when I accepted the interim chair position. | 1 | 7\% | 0 | 0\% | 1 | 4\% |
| I met all the required and most of the preferred qualifications identified in the job advertisement. | 1 | 7\% | 1 | 11\% | 2 | 8\% |
| My experience as interim chair added to my qualifications for the job. | 2 | 13\% | 2 | 22\% | 4 | 17\% |
| I enjoy(ed) the role of supporting the faculty, staff, and trainees. | 2 | 13\% | 2 | 22\% | 4 | 17\% |
| My role as interim chair is/was mostly enjoyable | 1 | 7\% | 0 | 0\% | 1 | 4\% |
| I want(ed) to help set a long-term strategic direction for the department. | 3 | 20\% | 1 | 11\% | 4 | 17\% |
| I want(ed) to develop new programs within the department. | 1 | 7\% | 0 | 0\% | 2 | 8\% |
| I want(ed) to build a stronger faculty, both those already present and recruiting new ones. | 2 | 13\% | 2 | 22\% | 4 | 17\% |
| I believed I could readily manage the departments finances. | 0 | 0\% | 1 | 11\% | 1 | 4\% |
| I want(ed) a greater opportunity to work with other institutional leaders in advancing the institution. | 0 | 0\% | 0 | 0\% | 0 | 0\% |
| Other | $2^{\text {b }}$ | 13\% | 0 | 0\% | 2 | 7\% |
| Total | 15 | 100\% | 9 | 100\% ${ }^{\text {a }}$ | 24 | 100\% ${ }^{\text {a }}$ |
| If you applied for the permanent position where you were interim chair, was it offered to you? ${ }^{\text {c }}$ | Males | \% of Males | Females | \% of Females | Total | \% of Total |
| Yes, after a single search, and I accepted. | $4^{\text {d }}$ | 80 | 1 | 33 | 5 | 63 |
| Yes, after more than one search, and I accepted. | 0 | 0 | 1 | 33 | 1 | 13 |
| No, after a single successful search. | 0 | 0 | 1 | 33 | 1 | 13 |
| No, I am no longer serving as the I interim, and although there is an ongoing search I am no longer in the search. | 1 | 20 | 0 | 0 | 1 | 13 |
| Total | 5 | 100 | 3 | $100^{\text {a }}$ | 8 | $100^{\text {a }}$ |

[^1]Table 5
Top three reasons for not applying for permanent chair positions ${ }^{\text {a }}$.

| Reasons: $\mathrm{N}=6$ males and 3 females | Male | \% of reasons | Female | \% of reasons | Total | \% of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| It was never my intent to become a permanent chair and serving as interim didn't change my mind. | 3 | 25\% | 0 | 0\% | 3 | 19\% |
| I decided to apply for a chair position at another institution. | 0 | 0\% | 0 | 0\% | 0 | 0\% |
| The interim chair role was sufficiently disagreeable that it discouraged my considering a permanent chair position. | 1 | 8\% | 0 | 0\% | 1 | 6\% |
| My former duties were more gratifying professionally than the administrative role of chair. | 2 | 16\% | 0 | 0\% | 2 | 12\% |
| Other types of leadership roles are more appealing to me. | 1 | 8\% | 1 | 25\% | 2 | 12\% |
| Family and/or personal reasons | 1 | 8\% | 1 | 25\% | 2 | 12\% |
| Other ${ }^{\text {b }}$ | $3{ }^{\text {b }}$ | 34\% | $2^{\text {b }}$ | 50\% | $6^{\text {b }}$ | 38\% |
| Total | 12 | 100\% ${ }^{\text {c }}$ | 4 | 100\% | 16 | 100\% ${ }^{\text {c }}$ |

${ }^{\text {a }}$ Interim Chairs who had not applied for the permanent position in a national search were asked to identify their three top reasons for not applying. Although all 5 males and 2 females in this category responded to this question, two additional respondents also gave reasons for not applying, one a male where the institution has not yet initiated a search and is no longer an interim chair and a female whose institution has not initiated a search as yet, but does not intend to apply. These responses are also recorded here as they properly represent the attitude of interim chairs not interested in pursuing permanent positions. Although the possibility of reasons was 54 ( $6 \times 3$ for men $+6 \times 3$ for women), several respondents chose only one or two reasons for not wanting to become permanent chairs.
${ }^{\mathrm{b}}$ One male stated he had accomplished what he wished to do already; one male and one female stated they did not believe that they met the qualifications for chair; one male stated he had concerns about the leadership to whom he would report; and one female stated she felt it was too late in her career to take on the permanent chair position.
${ }^{\text {c }}$ Rounding of percents in the column above actually totaled $99 \%$.
reorganization. In the remaining 5 institutions, 5 females were chosen without a national search. They indicated that a search was not initiated because (1) the dean said that "there was no need for one" (1 female), (2) the dean was satisfied with their performance ( 3 females), and (3) there was a unanimous request that the dean and CEO choose the interim chair as the permanent chair ( 1 female). Two of these latter 5 females indicated that an additional factor was that there were vacant chairs in other larger departments, and therefore, there were limited resources for a national search.

We asked former interim chairs who are now permanent chairs how they compared serving as a permanent chair with serving as an interim chair (Table 7). Overall, most males $(3 / 5)$ and females $(5 / 8)$ found that the permanent position was much more satisfying than serving as interim chair, and the remainder of both males and females found that it was at least as satisfying. The reverse was true for the issue of stress and requirement for administrative time and effort. While a few males $(2 / 5)$ and females $(3 / 8)$ found the permanent role much more stressful and requiring more administrative effort and time, the remainder found the position of permanent chair similar in stress and in administrative effort and time ( $5 / 8$ females, $2 / 5$ males) or less stressful and less demanding of time and effort ( $1 / 5$ males). In a final question, we asked the respondents to rank their satisfaction with "the commitments made to you as

Table 6
Status of department of pathology chair positions at nine institutions that did not initiate a national search for permanent chair ${ }^{\mathrm{a}}$.

| Status | Male <br> Interim | $\%$ <br> Chairs | Female <br> Interim | $\%$ <br> Chairs | Total | $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Dean appointed <br> interim chair to <br> the permanent <br> chair position <br> without a search | 0 | $0 \%$ | 5 | $71 \%$ | 5 | $56 \%$ |
| No search was <br> initiated, and <br> interim chair is <br> still in an interim <br> chair position | 1 | $50 \%$ | 2 | $29 \%$ | 3 | $33 \%$ |
| No search was <br> initiated, but <br> another interim <br> chair was <br> appointed | 1 | $50 \%$ | 0 | $0 \%$ | 1 | $11 \%$ |
| Total |  |  |  |  |  |  |

${ }^{\text {a }}$ See text for possible explanations for why searches were not initiated.
permanent chair which will help you build a successful department" (with 1 being least satisfied and 10 being most satisfied). Two of the female chairs who were appointed without a national search did not respond to this question, but overall, the level of satisfaction was similar between the current male permanent chairs (average 7.0) and current female permanent chairs (average 6.5). Of interest is that female chairs

Table 7
Satisfaction of permanent chair appointees.

| Permanent Position as Compared to Interim Position; $\mathrm{n}=13^{\mathrm{a}}$ | Males | \% of Males | Females | \% of Females | Total | \% of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Is much more satisfying | 3 | 60\% | 5 | 63\% | 8 | 62\% |
| Is equally satisfying | 2 | 40\% | 3 | 37\% | 5 | 38\% |
| Is less satisfying | 0 | 0\% | 0 | 0\% | 0 | 0\% |
| Total | 5 | 100\% | 8 | 100\% | 13 | 100\% |
| Is much more stressful | 2 | 40\% | 3 | 37\% | 5 | 38\% |
| Is equally stressful | 2 | 40\% | 5 | 63\% | 7 | 54\% |
| Is less stressful | 1 | 20\% | 0 | 0\% | 1 | 8\% |
| Total | 5 | 100\% | 8 | 100\% | 13 | 100\% |
| Requires more administrative effort/time | 2 | 40\% | 3 | 37\% | 5 | 38\% |
| Requires equal amounts of administrative effort/time | 2 | 40\% | 5 | 63\% | 7 | 54\% |
| Requires less administrative effort/time | 1 | 20\% | 0 | 0\% | 1 | 8\% |
| Total | 5 | 100\% | 8 | 100\% | 13 | 100\% |
| Satisfaction with Commitments Made to Permanent Chair, $\mathbf{n}=10^{\text {b }}$ |  |  |  |  |  |  |
| On a scale of $1-10$ with 10 being the highest level of satisfaction. | 7.0 |  | $6.5{ }^{\text {c }}$ |  | 6.7 |  |

${ }^{\text {a }}$ One respondent (male) was an interim chair who had become permanent chair, but at the time of the survey was no longer an interim or permanent chair; all others were permanent chairs at the time the survey was submitted.
${ }^{\mathrm{b}}$ All respondents were current permanent chairs; 4 males and 6 females.
c The satisfaction score for commitments made to them was lower for females appointed without a national search $(\mathrm{n}=3$; 5.3) than for females appointed after a national search ( $n=3 ; 7.7$ ). Additional comments from 2 respondents ( 1 male, 1 female) with lower scores reflected sense that serving as an interim chair had disadvantaged them in negotiating for commitments for their success.
appointed after a search indicated a higher level of satisfaction with commitments made to them (7.3) than female chairs appointed without a national search (5.3).

## Discussion

Greater diversity in senior leadership is needed in academic medical centers. ${ }^{3}$ Females continue to be under-represented in department chair and dean positions, and a better understanding of how to increase their numbers in these two important positions would be useful. ${ }^{1}$ Prior leadership experience is critically important in becoming a medical school dean, and experience as a department chair was reported to be the most common prior leadership experience of deans. ${ }^{4}$ Thus, having more females appointed to chair positions serves not only to increase diversity of chairs but also provides a more gender-diverse pool from which to fill the position of dean. Prior leadership experience was considered important in the career success of both interim and permanent female chairs of pathology. ${ }^{2}$ Academic pathology departments typically offer many opportunities for leadership, and deans are likely to choose from among faculty members with leadership experience to serve as the interim chair. Although serving as an interim chair can have a negative impact on one's career, it can also be beneficial, including providing the added leadership experience needed for success in becoming a permanent chair. ${ }^{5}$ Therefore, we initiated the current study to determine how often the interim chair position led to a permanent chair position and whether there might be gender differences in how often this pathway was taken.

A major finding of our study was that female interim chairs are nearly twice as likely as male interim chairs to become permanent chairs, at least during the time frame of this study (See Table 8 for a summary of key points of our study). One possible reason for this finding was that females who accept the role of interim chair more often than males aspire to a permanent chair position. Thus, more females than males might view serving as an interim chair as an opportunity to learn more about being a chair and provide experience that would qualify them for a permanent position. Unfortunately, the response rate for our study was too small (slightly less than a half of the 50 interim chairs who served from January 2016 to June 2022) so that it was not possible to fully confirm this speculation. However, one finding was that the average age of male interim chair respondents (59.2 years) was significantly greater than that of female interim chair respondents ( 50.4 years). It is possible that many of the male interim

Table 8
Summary of key points.

[^2]chairs had settled into a favored late career pathway without a further desire for chair leadership while the females were still at a stage in their careers where the challenge of serving as a chair was still a worthwhile pursuit. That two of the male interim chairs had already been chairs prior to 2016 fits with this possibility. Furthermore, among the responding interim chairs, females were slightly more likely to acknowledge that becoming a permanent chair was a longterm goal and that serving as an interim chair allowed them to see what being a chair entailed (4/12 females, compared with $2 / 12$ males, Table 3). Additionally, slightly more males than females acknowledged that when accepting the role of interim chair, they had no aspiration to become the permanent chair ( $4 / 12$ males, compared to 3/12 females, Table 3). Finally, when a national search was initiated by the institutions of our respondents, a slightly higher ratio of female interim chairs applied for the permanent position than male interim chairs ( $2 / 3$ females compared to $5 / 10$ males, Table 4). Still, since only $36 \%$ of male interim chairs responded to the survey, firm conclusions about why female interim chairs are more likely than males to become permanent chairs remain speculative. It is important to note that had we followed all the males and females who at the end of the study were still interim chairs until the position of permanent chair was filled at their institutions, more male interim chairs might have become permanent chairs and achieved parity, or even exceeded, with women interim chairs who became permanent chair.

One striking finding was that of the 8 females appointed to permanent chair positions during their service as interim chairs (Table 1), 5 were appointed in the absence of a national search (Table 6). While we did not survey the deans in these 5 institutions, these females noted that their deans were satisfied with their performances as interim chairs. A few also expressed that their institutions had limited resources for national searches. This point fits with the expressed lower level of satisfaction of this group of female permanent chairs with commitments made to them at the time they negotiated their permanent appointments. In contrast, we are not aware of an example of a male interim chair who became a permanent chair without a search. While all females who became permanent chairs responded to our survey, only half of the males did. It is possible that at least some of these non-responding males were also appointed without searches.

A recent survey of all current pathology chairs, many of whom have been in these roles for well over the $51 / 2$ year period covered by our study, found that $32 \%$ of female chair respondents had previous experience as interim and/or acting chairs (similar to an earlier study of all female chairs in which the percent was $35{ }^{2}$ ), whereas only $24 \%$ of males had held these positions. ${ }^{6}$ This latter study is in accordance with the current findings that although males are chosen as interim chairs more often than females, they are less likely than females to subsequently become permanent chairs. We speculate that males who are interested in becoming permanent chairs prefer to directly seek permanent chair positions if they have an interest in that role.

Not surprisingly, no gender differences were identified in the sense of satisfaction expressed about serving as permanent chairs. Both males and females found serving as a permanent chair either more satisfying or as satisfying as serving as an interim chair. Furthermore, there was no remarkable difference between males and females in whether they found the permanent role more stressful or requiring more time and effort. We also assessed whether there might be gender differences in satisfaction regarding institutional commitments made that would help them serve successfully as chairs. A small but not significantly greater satisfaction was expressed by the male permanent chairs. However, this trend was best explained by a lower satisfaction expressed by the female permanent chairs who had been appointed without a national search. One male and one female permanent chair commented that they believed that serving as the interim had compromised their ability to obtain stronger commitments from their administration. Thus, while serving as an interim chair can be a pathway to becoming a permanent chair, the interim role may also carry some disadvantages in pursuing
the permanent role. This disadvantage may be more likely if there is no national search.

One weakness of the current study is the retrospective nature of the survey, which may lead to recollection bias by the survey respondents. However, given that this study covers only a $51 / 2$-year time period, we believe that most responses accurately reflect reasoning that occurred at the time of acceptance of the interim chair position and, where applicable, decisions to either apply for or not apply for a permanent chair position. The greatest weakness is that only 24 of the 50 interim chairs responded to the survey, and therefore, the ability to find statistical differences between male and female interim chairs was limited. And among the various chair groupings shown on Table 1 and summarized in the results, there was disparity between the men and women complicating detecting gender differences. Thus, a higher percent of women than men current permanent chairs and a higher percent of men than women continuing interim chairs responded to the survey. Strong biases could have been introduced based on who decided not to respond. Nevertheless, we have presented the results of much of the survey descriptively to encourage future study and discussion. Finally, we recognize that a survey of the Deans or other decision makers would be valuable in order to more fully understand why each interim chair was chosen and for those who became permanent chairs, why that choice was made. This information would be of particular interest in the case of the females who were appointed to permanent chair roles without a national search.

Over the $51 / 2$ year period covered by our study, males were appointed as interim chairs twice as often as females, and our survey determined that the average age of these male interim chairs was almost 10 years greater than the average of the female interim chairs. It was possible that added years of leadership experience may have been a significant factor in making the interim appointments in some institutions whereas appointments of capable females who had at least some years of leadership experience was a more important criteria in others. The current study supports the value of an interim chair appointment as a pathway to becoming a permanent chair for females. Deans and other institutional leaders who make interim leadership appointments should strongly consider using temporary appointments as a mechanism to further develop leaders in contrast to appointing already experienced leaders who might not be interested in new leadership positions. Transitional leadership positions at the chair and dean level are inevitable in academic medicine; deans and other leaders should recognize that making these appointments provides a great
opportunity for strengthening diversity, equity, and inclusion within their institutions. ${ }^{7}$

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[^1]:    ${ }^{\text {a }}$ Rounding to the nearest full number in percent led to a total percent of more or less than the shown $100 \%$.
    ${ }^{\mathrm{b}}$ Two additional reasons they applied for the permanent chair position were added in the Other category by two male respondents: 1) "Having known my department and all its staff, I had my vision on how to take it to the next level over the next 10 years" and 2) "COVID was an exciting time to lead a medical laboratory, and allowed me to exercise my Clinical Pathology executive skills."
    ${ }^{c}$ Two interim chairs (one male and one female) did not apply during a national search, but were appointed to and accepted the permanent chair positions-they are not included in this last section of the table.
    ${ }^{d}$ Although one male interim chair applied for, received an offer for and accepted a position as the permanent chair during a national search, he is no longer a permanent nor interim chair.

[^2]:    1. From APC database ( 50 interim chairs)
    a. Although more males than females were appointed as interim chairs ( $66 \%$ versus $34 \%$ ), female interim chairs ( $47 \%$ ) were more likely to become permanent chairs than male interim chairs (27\%)
    2. From survey data from interim chairs (24 interim chairs)
    a. Male interim chairs were older ( 59 years) than female interim chairs (50 years).
    b. Reasons for accepting interim chair positions did not differ significantly between males and females with a trend toward more females indicating being a permanent chair was a long-term goal and the interim position offered an opportunity to see what the position might entail.
    c. Reasons for not applying for the permanent chair position did not differ significantly between male and female interim chairs with a trend for more males indicating that they never wished to pursue the permanent position when they accepted the interim position.
    d. Five female interim chairs were appointed as permanent chairs without a national search.
    e. The majority of both males and females found serving as a permanent chair more satisfying than serving as interim chair.
    f. Both males and females were satisfied with the commitments they received when appointed as permanent chairs, although females appointed in the absence of a national search were less satisfied with commitments made to them than females appointed after a national search.
