ICPI is the Publisher of the
Directory of Pathology Training Programs
www.pathologytraining.org
Acknowledgments

The following members of ICPI provided critical resources to develop this presentation:

- American Society for Clinical Pathology
  - ASCP Fellowship & Job Market Survey - 2012
- American Society for Investigative Pathology
- Association of Pathology Chairs
- College of American Pathologists
  - Practice Characteristics Survey Report – 2011

Information was also retrieved from the AMA FREIDA Online Specialty Training Website

https://freida.ama-assn.org
Member Societies of ICPI

CHARTER MEMBERS
- American Society for Clinical Pathology (ASCP)
- American Society for Investigative Pathology (ASIP)
- Association of Pathology Chairs (APC)
- College of American Pathologists (CAP)
- United States and Canadian Academy of Pathology (USCAP)
Member Societies of ICPI

ASSOCIATE MEMBERS

- Academy of Clinical Laboratory Physicians and Scientists (ACLPS)
- American Association of Neuropathologists (AANP)
- American Board of Pathology (ABP)
- American College of Veterinary Pathologists (ACVP)
- American Society of Cytopathology (ASC)
- Arthur Purdy Stout Society of Surgical Pathologists
- Association for Molecular Pathology (AMP)
- Canadian Association of Pathologists
- National Association of Medical Examiners (NAME)
- Papanicalaou Society of Cytopathology
- Society for Pediatric Pathology (SPP)
What is Pathology?

• Diagnostic Medicine
• Teaching
  ▪ Medical Students
  ▪ Residents
  ▪ Graduate Students
  ▪ Fellow Physicians
  ▪ Other Health Care Providers
• Basic and Clinical Research into Mechanisms of Disease
What are the Career Options for Pathologists?

- Community Practice (80%)
- Academic Practice & Medical School Administration (15%)
- Industry (3%)
- Government, Public Health & Regulatory Positions, e.g., FDA, NIH, CDC (1%)
The Job Market for Pathologists is Excellent

There will be a shortage of pathologists in the next two decades, starting in 2015*:

• Beginning in 2014, the number of retiring pathologists will increase, peaking by 2021.
  • The number of graduating pathology residents will be less than the number of retiring pathologists per year.
• Anticipated population growth and increases in disease incidence will lead to a net deficit of more than 5,700 pathologists by 2030.

Demographics

Active Pathologists in the US*

- Nearly 18,000 actively practicing pathologists
  - 93% are ABP-Board Certified
  - 5.8 pathologists per 100,000 population
  - Projected retirement age at 71 years
- Based on the current number of pathology residents in-training, pathologist strength will fall by 2030 to 14,800 (3.9 per 100,000)

* CAP Member Survey 2011
## Pathology Practice Demographics

<table>
<thead>
<tr>
<th>Type of Practice</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo</td>
<td>7%</td>
</tr>
<tr>
<td>Pathology Group</td>
<td>67%</td>
</tr>
<tr>
<td>Multispecialty Group</td>
<td>7%</td>
</tr>
<tr>
<td>Medical School</td>
<td>10%</td>
</tr>
<tr>
<td>Hospital</td>
<td>10%</td>
</tr>
<tr>
<td>Independent Laboratory</td>
<td>9%</td>
</tr>
<tr>
<td>Locum Tenens</td>
<td>1%</td>
</tr>
</tbody>
</table>

*College of American Pathologists Survey, 2006*
Pathology Practice Demographics

Practice Size

- 1-5  40.9%
- 6-10 21.9%
- 11-15 12.5%
- 16-20  7.6%
- >20  17.1%

CAP Member Survey 2011
Compensation

The average (mean) base salary is $257,850

The average base salary for pathologists with 1-10 years of experience is $201,775

Pathologists with 11-20 years of experience earned an average base salary of $260,119

Pathologists with more than 30 years of professional experience earned a base salary of $279,011.

CAP Member Survey 2011
Compensation

59% of respondents receive additional compensation other than base salaries

- Incentive compensation ~$94,000
- Deferred income ~$34,000
- Other income ~$56,000

CAP Member Survey 2011
Benefits

• Paid vacation  90%
• Health Insurance  83%
• Malpractice premiums  82%
• Retirement plan  83%
• Paid CME  72%
• Paid sick leave  57%
• Bonus % of protection  21%
• Tuition reimbursement  13%
• Other  23%

CAP Member Survey 2011
What is the Lifestyle for Pathologists?

- 49.2 hour work week vs. 55 hour average work week for all specialties
- Above average professional satisfaction (70%)
- Above average family satisfaction
- Average professional respect
- Below average stress
Pathology Residency Training Programs

- Number of accredited programs in 2011: 145
- Number of active residents/fellows: 2,327
- Percent female: 53.9%
- Percent international medical graduate: 37.4%
- Average resident compensation: $48,524
- Resident work hours (PGY-1)
  - Average hours on duty per week: 51.4
  - Average max consecutive hours on duty: 13.7
  - Average days off per week: 1.8
  - Average number weeks vacation: 3.3

AMA FREIDA 2013
Pathology Residency Training Programs

- Anatomic & Clinical Pathology (4y) 85%
- Anatomic Pathology (3y) 10%
- Clinical Pathology (3y) 5%

The majority of fellows in Forensics, Hematopathology, and Pediatric Pathology came from AP/CP residency training.

About half of Neuropathology fellows came from AP-only.

About half of Transfusion Medicine fellows came from CP-only.
Since 2006, the number of residents who pursue more training (apply for fellowships) immediately after residency has increased.

- Pursue More Training: 86.3%
- Academic Medicine: 5.6%
- Military: 2.3%
- Non-clinical Research: 2.0%
- Practice in the US: 3.8%
  - Group practice: 61.9%
  - In same state as training program: 47.6%
  - In underserved area: 4.8%

ASCP Fellowship & Job Market Survey 2012
Fellowship Experience After Residency

Why do residents pursue a fellowship?

- Enhancement of pathology skills
- Plan a career based on a fellowship specialty
- Enhance employability

Most residents finalize their fellowship plans during PGY-3

- Less than 10% decide on fellowship pathways in PGY-4.

ASCP Fellowship & Job Market Survey 2012
Over the past decade, there has been a trend towards multiple fellowships.

Number of Fellowships per resident
- 0 – 5%
- 1 – 60%
- 2 – 34%
- 3 – 1%

ASCP Fellowship & Job Market Survey 2012
Fellowship Experience After Residency

Over the last five years, there has been an increase in both the number of applications submitted and the number of interview offers received.

How many Applications Submitted?
- 0: 7%
- 1 to 3: 41%
- 4 to 6: 17%
- 7 to 10: 14%
- >10: 21%

How many Interviews?
- None: 8%
- 1 to 3: 60%
- 4 to 6: 24%
- 7-10: 6%
- >10: 2%
Applying for Jobs Immediately After Residency

Only 139 PGY-3 and PGY-4 residents applied for a specific job in 2012.

Number of Jobs Applied for

<table>
<thead>
<tr>
<th>Number of Jobs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>68%</td>
</tr>
<tr>
<td>4-6</td>
<td>14%</td>
</tr>
<tr>
<td>7-10</td>
<td>6%</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>12%</td>
</tr>
</tbody>
</table>

Perception of where jobs are available

<table>
<thead>
<tr>
<th>Perception of Where Jobs are Available</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community group practice</td>
<td>44%</td>
</tr>
<tr>
<td>Academic institutions</td>
<td>36%</td>
</tr>
<tr>
<td>Reference laboratories</td>
<td>4%</td>
</tr>
<tr>
<td>Government/military</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>

ASCP Fellowship & Job Market Survey 2012
Applying for Jobs Immediately After Residency

42% of residents restricted their search for a job due to geography in 2012

Major factors:
- Spouse’s job 38%
- Other lifestyle/family issues 39%
- Native to the area 20%
- Professional contacts in area 3%

ASCP Fellowship & Job Market Survey 2012
Job-Hunting Experience Immediately After Residency

How many Offers?
- 0: 43%
- 1: 39%
- 2: 12%
- 3: 4%
- >3: 2%

Salary Offered:
- >$100,000: 8%
- $100-150,000: 28%
- $150-200,000: 28%
- $200-250,000: 2%
- >$250,000: 17%
- Not discussed: 17%

ASCP Fellowship & Job Market Survey 2012
The amount of time it took to find a job varied by specialty.

Nearly one-half of all fellows found a job within 2 months.

The vast majority of fellows found a job within 6 months.

Except for rare cases, all fellows found a job within 1 year.
Job-hunting patterns vary depending on the training background and perceived competition by specialty

**FORENSICS**

Number of jobs formally applied for:
- 0 6%
- 1-3 72%
- 4-6 11%
- 7-10 6%
- >10 6%

Number of job offers:
- 0 11%
- 1 50%
- 2 31%
- 3 or more 9%

ASCP Fellowship & Job Market Survey 2012
Job-Hunting Experience After Fellowship

Starting annual salaries vary depending on the specialty

**FORENSICS**

- <$100,000: 0%
- $100-150,000: 28%
- $150-200,000: 56%
- $200-250: 9%
- >$250,000: 6%

ASCP Fellowship & Job Market Survey 2012
Job-hunting patterns vary depending on the training background and perceived competition by specialty

HEMATOPATHOLOGY

Number of jobs formally applied for:
- 0: 15%
- 1-3: 27%
- 4-6: 15%
- 7-10: 12%
- >10: 31%

Number of job offers:
- 0: 31%
- 1: 37%
- 2: 20%
- 3 or more: 12%

ASCP Fellowship & Job Market Survey 2012
Job-Hunting Experience After Fellowship

Starting annual salaries vary depending on the specialty

HEMATOPATHOLOGY

- <$100,000: 2%
- $100-150,000: 5%
- $150-200,000: 43%
- $200-250: 30%
- >$250,000: 16%
Job-hunting patterns vary depending on the training background and perceived competition by specialty

**NEUROPATHOLOGY**

Number of jobs formally applied for:
- 0: 39%
- 1-3: 45%
- 4-6: 0%
- 7-10: 3%
- >10: 12%

Number of job offers:
- 0: 48%
- 1: 39%
- 2: 12%
- 3 or more: 0%

ASCP Fellowship & Job Market Survey 2012
Starting annual salaries vary depending on the specialty

**NEUROPATHOLOGY**

- < $100,000: 0%
- $100,000 - $150,000: 24%
- $150,000 - $200,000: 24%
- $200,000 - $250,000: 12%
- > $250,000: 12%
Job-hunting patterns vary depending on the training background and perceived competition by specialty

TRANSFUSION MEDICINE

Number of jobs formally applied for:
- 0 jobs: 24%
- 1-3 jobs: 19%
- 4-6 jobs: 27%
- 7-10 jobs: 5%
- >10 jobs: 24%

Number of job offers:
- 0 offers: 30%
- 1 offer: 38%
- 2 offers: 14%
- 3 or more offers: 19%
Job-Hunting Experience After Fellowship

Starting annual salaries vary depending on the specialty

TRANSFUSION MEDICINE

- <$100,000: 0%
- $100-150,000: 19%
- $150-200,000: 69%
- $200-250: 8%
- >$250,000: 0%

ASCP Fellowship & Job Market Survey 2012
Job-Hunting Experience After Fellowship

Job-hunting patterns vary depending on the training background and perceived competition by specialty

PEDIATRIC PATHOLOGY

Number of jobs formally applied for:
- 0: 29%
- 1-3: 29%
- 4-6: 12%
- 7-10: 12%
- >10: 18%

Number of jobs formally applied for:
- 0: 47%
- 1: 35%
- 2: 18%
- 3 or more: 0%
Job-Hunting Experience After Fellowship

Starting annual salaries vary depending on the specialty

**PEDIATRIC PATHOLOGY**

- < $100,000: 0%
- $100-150,000: 22%
- $150-200,000: 33%
- $200-250,000: 44%
- > $250,000: 0%

ASCP Fellowship & Job Market Survey 2012
Pathology Specialties
(Fellowship Training)

Subspecialty Certification in the US:
- Blood Banking/Transfusion Medicine
- Chemical Pathology
- Clinical Informatics
- Cytopathology
- Dermatopathology
- Forensic Pathology
- Hematology
- Medical Microbiology
- Molecular Genetic Pathology
- Neuropathology
- Pediatric Pathology
Pathology Specialties
(Fellowship Training)

Other Subspecialties
- Cytogenetics
- Molecular Pathology
- Nuclear Medicine

Anatomic/Surgical Pathology Subspecialties
- Bone & Soft Tissue
- Cardiac
- Gastrointestinal/Hepatic
- Gynecologic
- Head & Neck
- Pulmonary
Current and Future Career Opportunities

• Every academic department in U.S. has a vacancy (130 medical schools; 155 training programs)

• Pathology Departments have $400 million in NIH research grants (Special Opportunities for Physician Scientists)

• Diagnostic Medicine: $40 billion market, growth 5-7% yearly
Directory of Pathology Training Programs is available in print and online at www.pathologytraining.org
Where to go & what to do next?

For information about pathology training and fellowships:

ICPI and its charter member societies

- www.pathologytraining.org
- www.apcprods.org
- www.ascp.org
- www.asip.org
- www.cap.org
- www.uscap.org
- www.abpath.org
- www.acgme.org
- www.ama-assn.org/Freida/