HARVARD SCHOOL OF DENTAL MEDICINE

ADVANCED GRADUATE EDUCATION PROGRAM IN ORAL AND MAXILLOFACIAL PATHOLOGY

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INTRODUCTION

The Advanced Graduate Education (AGE) program in Oral and Maxillofacial Pathology (OMP) program at Harvard School of Dental Medicine (HSDM) is a four-year program that culminates in the awarding of both a *clinical certificate* in OMP and a Doctor of Medical Sciences (DMSc) in Oral Biology. Some students may take five years to complete the program. A three-year program with the awarding of both a certificate in OMP and a Master of Medical Sciences (MMSc) in Oral Biology is available for selected students who are residents or citizens of the U.S. or Canada. The goal of this program is to train future leaders in the field of OMP. The program is uniquely organized such that students benefit from the rich academic and institutional resources of HSDM (and by extension, Harvard Medical School), while receiving their microscopic pathology training at StrataDx Inc, a private pathology laboratory, and the Depts. of Pathology, Brigham and Women's Hospital (BWH), Massachusetts General Hospital (MGH) as well as at the Massachusetts Eye and Ear Infirmary (MEEI). Clinical training in Oral Medicine (or clinical oral pathology) occurs at the Division of Oral Medicine and Dentistry at BWH and other Harvard Medical School affiliated institutions (such as the Dana-Farber Cancer Institute). The wealth of educational and research opportunities in the Harvard medical community is unparalleled.

The Harvard environment is largely dependent on self-motivation, self-learning, curiosity and passion for knowledge. Students are expected to work at their highest possible level, seek out opportunities, embrace challenges, and set high goals and expectations for themselves. While there is a considerable framework of organization and structure, it is what students put into the program, at every level (i.e. coursework, seminars, clinical rotations, research), that will define what they take away when they leave at the end of their training. For some, this approach to learning can be challenging and somewhat intimidating at first; however there are many resources in place to provide adequate guidance throughout the duration of training.

The following pages provide a detailed outline of the program, including descriptions of the didactic, clinical, and research activities and requirements. Specific details are subject to change, and any questions should be directed to the Program Director.

GOALS AND OBJECTIVES OF THE PROGRAM

The OMP graduate program is committed to providing the highest quality of patient care. The specialty of OMP involves both the diagnosis of head and neck pathology in the clinical setting as well as microscopic diagnosis of biopsy specimens. The goals and objectives of the training program, therefore, are as follows:

1. Provide a strong didactic base of knowledge in all aspects of OMP and general pathology and be knowledgeable on current advances in diagnostic techniques
2. Develop critical thinking skills for evaluation of the scientific literature
3. Develop strong presentation skills to be an effective teacher and presenter at conferences
4. Develop strong microscopy skills so that they can accurately diagnose surgical specimens and serve as a consultant for the diagnosis of head and neck pathology
5. Develop strong clinical skills so that they can treat diagnose and manage pathology of the head and neck and in particular, mucosal diseases
6. Develop research and manuscript-writing skills
7. Develop strong inter-professional and communication skills so that they can work effectively in any health care setting in collaboration with dental and medical colleagues, and to be able to function as a member of the health care team by participating in tumor boards, seminars and teaching rounds
8. Provide exposure to how a pathology laboratory functions and be able to set up and direct laboratory services
9. Encourage participation in community-building activities and professional outreach, so they can act as an ambassador for the specialty of oral and maxiilofacial pathology and dentistry.

PROGRAM COMPETENCIES

The educational program will provide training to the level of proficiency for the following clinical skills:

1. Diagnose conditions related but not limited to:
    a. Odontogenic cysts and tumors
    b. Odontogenic and non-odontogenic infections
    c. Salivary gland disease
    d. Mucosal disease
    e. Bone and soft tissue tumors
    f. Pigmented lesions
    g. Skin conditions commonly found in the head and neck region
    h. Oral manifestations of systemic disease
    i. Metastatic lesions
2. Select and interpret appropriate routine and immunohistochemical stains and other tests (such as in situ hybridization), and interpretation of immunofluorescence studies.
3. Interpret periapical, bite wing and panoramic radiographs, and interpret on at least a basic level, CT, MRI, and PET scans
4. Evaluate comprehensively a patient with regard to history-taking (history of present illness, medical, surgical and medications history, allergy history, and family and social history), evaluating the condition, providing a working and differential diagnosis, and developing and implementing a treatment plan and follow-up program.
5. Select appropriate clinical tests and interpret the results to help in clinical diagnosis.
6. Evaluate the literature critically and in a discerning manner
7. Communicate effectively with other health care providers
8. Prepare PowerPoint presentations and deliver them in a professional manner

PROGRAM DETAILS

Program Duration

The program begins July 1st with orientation at HSDM; rarely, a student may be admitted in January. In general, students in the DMSc program will take a minimum of 4 years to complete the didactic, clinical and research components of their program. Some students may take 5 or even 6 years to complete. The maximum program duration is 7 years. The MMSc program is 3 years.

Vacation Days

Per HSDM policy, students may have a total of 20 days of vacation per academic year. Time off must be requested at least one month in advance, and is subject to the approval of the Program Director.

Sick Leave and Leave of Absence

An illness of 12 consecutive days duration or greater, or individual sick days that total twelve days or greater per year, will require work time to be made up at the conclusion of the program. To avoid having to make up this time, sick days can be deducted from vacation days. In the event that an extended sick leave warrants a medical leave of absence, a formal request must be made to the Program Director and to the Committee on Advanced Graduate Education at HSDM. Please refer to the HSDM Student Handbook for further details.

Holidays

Holidays vary based on the specific institution at which the student is currently studying and/or rotating:

HMS/HSDM Holidays
New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day

BWH Holidays
New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Thanksgiving Day, Christmas Day

Certifications

Cardiopulmonary resuscitation (CPR) and advanced cardiac life support (ACLS)
It is the student's responsibility to be certified every two years in CPR and ACLS. Review courses for CPR and ACLS are offered at HSDM at the beginning of every academic year. Notification is by mail or e-mail.

OSHA (Occupational Safety and Hazards Administration)
Students are required to renew this license annually at HSDM, and are notified of courses by mail or e-mail.

Dental Licenses

A copy of a valid dental license (for American students), renewed annually, must be given to the department administrator. Foreign students renew limited license annually. Please see the department administrator about this.

Bi-annual Progress Meetings with Program Director

Students will meet with the Program Director to review their progress twice a year, in the fall and spring.

Evaluations, Examinations and Promotions

Student promotion at the end of each academic year is entirely dependent on performance during the year, in all aspects of training. Promotion is NOT automatic and is based on written examinations during didactic coursework, level of participation during seminars, performance during "sign-out" and performance at a "mock" examination that is formatted in a fashion similar to the Fellowship Examination (see below) given at the end of each year. In addition to this "mock" examination, a separate examination requiring short and essay-type answers will also be given to test in-depth understanding of concepts.

It is expected that students will pass all didactic courses. Courses are graded Pass, Fail or Honors. Students will be evaluated at the end of each semester on performance in every rotation and all seminars. Students will also be asked to evaluate the rotation as well as the seminars so that they may be improved. Students are asked to fill in the evaluation form at end of every semester and rotation (please ask the Program Director for the form). Students will need to provide the Program Director with the name of the person with whom they had the most contact during each rotation so that an evaluation form can be sent to him/her.

DMSc candidates will need to pass an Oral Qualifying Examination at the end of the second year or beginning of third year. Successful defense of the Thesis Proposal and finally of the Thesis is proof of satisfactory performance of the research requirement.

MMSc candidates will need to pass the Introduction to Research Course where they will submit and defend a research proposal in NIH format. However, students are still expected to complete at least one research project prior to graduation.

Curriculum vitae

Students must convert their curriculum vitae into the Harvard format immediately (see end of manual) .

Required Reading

Reading is an essential component of the training program, and students are expected to keep up with all assigned readings for courses and seminars, as well as self-directed reading.

During the first year and before July of the second year, all students must read the following books

- Jean M. Bruch, Nathaniel S.Treister, *Clinical Oral Medicine and Pathology*. Humana Press, 2010. ISBN 978-1-60327-520-0

This book provides a strong basis on which to build oral medicine knowledge and mastery of the material in the beginning of training is vital. An examination based on this book will be given during the last week of July or the first week of August of the second year. There is a copy of this in the Strata library.

Students must purchase a recent copy of the following oral pathology text books:

- Brad W. Neville, Douglas D. Damm, Carl M. Allen and Angela C. Chi . *Oral and Maxillofacial Pathology*, 4th edition. Elsevier 2015. ISBN: 978-1-4557-7052-6
- Sook-Bin Woo. *Oral Pathology: An Atlas and Comprehensive Text.* Elsevier 2012. ISBN: 978-1-4377-2226-0

Another very good book to consider purchasing (we have a copy in our library) is

- Douglas Gnepp *Diagnostic Surgical Pathology of the Head and Neck*. Elsevier 2009 ISBN: 978-1-4160-2589-4

Other important books are the following:

Christopher D.M. Fletcher, Diagnostic Histopathology of Tumors, 4th edition, Elsevier, 2013

Eduardo Calonje, Thomas Brenn, Alexander Lazar, Phillip H. McKee. Mckee's Pathology of the Skin.4th edition, Elsevier, 2011. ISBN 1416056491

David Weedon. Weedon's Skin Pathology. Churchill Livingstone, 3rd edition, 2010

The library at StrataDx has numerous text books for bone pathology, soft tissue pathology, and skin pathology, among others and these are used throughout training. On-line access is available for many these text-books and you can log-in and download these. It is expected that students will also use PubMed extensively during their training.

Required Teaching Responsibilities

From the second year onwards, graduate students are required to participate in the Objective Structured Clinical Examination (OSCE) given to 3rd and 4th year pre-doctoral students at HSDM. Graduate students may also give lectures during the pre-doctoral oral pathology discipline in the course Oral System Sciences.

Professional Activities

American Academy of Oral and Maxillofacial Pathology

All students must become members of the American Academy of Oral and Maxillofacial Pathology (AAOMP) upon matriculation and throughout their training. Applications can be found through the academy website: www.aaomp.org

Students must subscribe to the Bulletin Board of Oral and Maxillofacial Pathology (BBOP):
Send an email to the following address: listserv@listserv,acsu.buffalo.edu
When you get a reply; type in: subscribe bboplist (first name) (last name)

American Academy of Oral Medicine

All students are also encouraged to become members of the American Academy of Oral Medicine (AAOM). Clinical oral pathology or oral medicine is integral to the training program and understanding the evolution and clinical appearance of oral mucosa disease and management helps tremendously in honing your skills as a histopathologist. Applications can be found through the academy website: www.aaom.com You should also consider applying for and taking the Fellowship examination for this academy although you will not be eligible for the certifying board examination unless you receive further training in this field.

Fellowship and Board Examinations

The Fellowship Examination is offered every year at the annual meeting of the AAOMP and the location varies from year-to-year. This is a one-day examination and passing it allows you to vote as a fellow of the academy on all issues that affect the academy. Many students and residents take this examination at the end of their third year to help them prepare for the Board examination. However, bear in mind that this examination is not at the level of the Board examination since passing it does not connote competency in the field, and only confers voting rights. This examination is divided into a written section (100 questions), a microscopic section (25 slides), and a clinical examination (25 clinical cases).

The Board Examination is offered every year in October in Tampa, Florida. Students are expected to take this certifying two-day examination after they finish the program. This examination is divided into a written section (200 questions), a microscopic section on oral, head and neck and general pathology (70 slides), and a clinical section (50 cases).

Please visit the AAOMP and ABOMP websites for additional information regarding these examinations.

Conferences and Travel

All graduate students and residents are invited to attend the Gorlin conference in Minnesota in October for three years of their training. This is an OMP residents' conference sponsored by the School of Dentistry in Minnesota to honor the late Dr. Robert Gorlin, an eminent oral and maxillofacial pathologist, and expenses are partially covered for all enrolled residents and graduate students. Students will present a case, attend seminars given by a pathologist who is well-known in his/her field of expertise, and network with other residents and students.

From the second year of the program onwards (and during the first if feasible), students must attend the AAOMP annual meeting. This is an important venue for meeting other residents/graduate students and leaders in the profession. The continuing education courses are usually excellent, up-to-date, and helpful in preparing for the board examination. Speakers are generally nationally and internationally renowned in their fields of expertise. Students are responsible for the costs associated with attending the meeting, although HSDM will defray costs up to $500 if students share a room and present a poster or abstract at the meeting. The time spent at the meeting (or any other academic conference) is not considered vacation time.

Other meetings/continuing education courses vary year to year but may include the following:

- Contemporary Concepts in Oral Pathology: one-day course offered one Saturday each at StrataDx in Lexington, MA; this is not given every year.
- Eastern Society of Teachers of Oral Pathology (ESTOP): weekend-long course offered each fall (location varies)
- Western Society of Teachers of Oral Pathology (WESTOP)
- MGH Current Concepts in Head and Neck & Endocrine Pathology : four-day course offered every other June in Boston, MA

Publications

Students are expected to email the Program Director whenever an abstract is presented at a national or international meeting, or a manuscript has been accepted for publication. Publishing articles is an important aspect of training and it is hoped that a student will publish one interesting case or case series, one original research article and one review paper during their training. All abstracts presented at the annual AAOMP meeting must be published, preferably within the year.

Contact Information

At the beginning of every year, students must check with the department administrator to be sure that the following are on file: home address, date of birth, SSN, and home and cell phone numbers. If these change during the year, students must notify the department administrator and Program Director. When students have identified a laboratory, they must provide the name of the Principal Investigator and address and phone number to the department administrator.

All students must have an email account at the dental school (@hsdm.harvard.edu) and check it daily. Please reply to all emails in a timely manner, generally within 24 hours of receipt, even if it is a simple “Got this, thanks” or something to that effect. This is courteous and professional. Please do not use your gmail or other email for school- or education-related mail. Once a Partners Outlook account has been established through the BWH at the start of the rotation in BWH’s Dept of Pathology the Partners email address (@partners.org) must also be checked regularly as this will be the primary mode of communication within the hospitals.

Harvard School of Dental Medicine Advanced Program in OMP: Program Curriculum, Clinical Rotations, and DMSc Deadlines

<table>
<tr><th></th><th>July</th><th>August</th><th>Sept</th><th>Oct</th><th>Nov</th><th>December</th><th>January</th><th>February</th><th>March</th><th>April</th><th>May</th><th>June</th></tr>
<tr><td>All Years</td><td colspan="11">OMP Seminar, every other Wednesday, 9am to noon, One Brigham Circle, 3rd floor. Annual schedule finalized in the early Summer. Advanced reading of assigned articles and preparation of Power Point presentations (when presenting a topic for the session) is mandatory. Only exceptions are courses that directly conflict, some clinical rotations, and during research experiments at which you must be present.
Oral Medicine Grand Rounds, first Wednesday of the month, 8-9am, One Brigham Circle, 4th floor. Attendance and regular presentations are mandatory.
IDP600.IN AGE Research Seminar Series, HSDM
Teaching: 3rd and 4th year predoctoral HSDM Objective Structured Clinical Examination (OSCE), Oral Medicine and Pathology examiner</td></tr>
<tr><td>Year 1 Didactics</td><td colspan="2">H/N Anatomy course</td><td colspan="5">Fall Semester Courses</td><td colspan="4">Spring Semester Courses</td></tr>
<tr><td>Year 1 Clinical</td><td colspan="2">Introduction to Histopathology</td><td colspan="9">Histopathology at StrataDx on Tuesday and Thursday</td></tr>
<tr><td>Year 1 Research</td><td colspan="11">• Laboratory rotations (recommend at least 2 before deciding on lab for thesis research)
• Identify research lab/mentor</td></tr>
<tr><td>Year 2 Didactic</td><td colspan="2">Baseline Oral Medicine Exam</td><td colspan="5">Completion of remaining DMSc course requirements.</td><td colspan="4">PD600.CBS Oral Qualifying Exam completion during the Spring semester</td></tr>
<tr><td>Year 2 Clinical</td><td colspan="7">Continue with Histopathology at StrataDx on Tuesday and Thursday</td><td colspan="4">General Anatomic/Surgical Pathology Rotation</td></tr>
<tr><td>Year 2 Research</td><td colspan="11">• Identify lab for thesis research project
• Submit Thesis Advisory Committee for approval for DMSc candidates
• HSDM NIH Format Research Proposal due by end of Fall semester (December) for MMSc candidates</td></tr>
<tr><td>Year 3 Didactic</td><td colspan="11">See “All Years”</td></tr>
<tr><td>Year 3 Clinical</td><td colspan="3">Clinical Pathology, ENT and Dematopathology</td><td colspan="3">Oral Medicine</td><td colspan="5">See “All Years”</td></tr>
<tr><td>Year 3 Research</td><td colspan="11">• Thesis project must be approved by the Thesis Advisory Committee by December of Year 3
• Thesis proposal must be approved by Thesis Advisory Committee by end of Spring of Year 3
• DMSc research during unscheduled time
• Take Fellowship Examination in May/June at annual meeting of AAOMP</td></tr>
<tr><td>Year 4/5 Didactic</td><td colspan="11">See “All Years”</td></tr>
<tr><td>Year 4/5 Clinical</td><td colspan="11">• Histopathology at StrataDx all day Tuesday and Thursday</td></tr>
<tr><td>Year 4 Research</td><td colspan="11">• Obtain approval from Program Director and Director of Research of Thesis Defense Committee
• Defend DMSc thesis by graduation deadline (typically middle of April)
• Present at Student Research Day in April of Year 4; submit final thesis, graduation in May
• Take board examination in Fall of beginning of 5th year.</td></tr>
</table>

DFCI = Dana-Farber Cancer Institute; MEEI = Massachusetts Eye and Ear Infirmary; MGH = Massachusetts General Hospital

COURSEWORK & RESEARCH

Formal didactics are a cornerstone of the advanced graduate education program in Oral Medicine. Below is a summary of the DMSc course requirements, as well as program specific required courses. All coursework is expected to be completed during the first two years of study, with the majority of credits being completed by the end of the first year. Please refer to the **HSDM Student Handbook** for specific details on requirements and deadlines, including course registration, including cross-registration and adding and dropping courses. Questions should be directed to the Office of the Registrar at HSDM.

The minimum number of course credits is 32 and 20 for the DMSc and MMSc respectively. This includes a minimum of 12 credits in HSDM Oral Biology Core courses (DMSc and MMSc), and a minimum of 12 and 4 credits in Graduate level Basic Science courses for the DMSc and MMSc respectively. Required courses are outlined below. Please see the HSDM Student Handbook for additional details.

The non-HSDM courses listed below have been approved for fulfillment of the DMSc requirements (minimum 12 credits) and are highly recommended based on the curriculum and relevance to the Oral Medicine program. This list is not exhaustive; however courses not listed below must be approved by the Program Director and registrar prior to enrollment.

When cross-registering for courses, credits transfer as follows:

HMS > HSDM 1:1
HSPH > HSDM 2.5:2
MIT > HSDM (Varies, check with Registrar's office)

Approved courses

Those courses *italicized* below are first year core courses for the Biological and Biomedical Sciences (BBS) PhD program and are excellent, comprehensive, in-depth graduate (doctoral) level courses. However, offerings may change from year to year so please check the Course Offerings for the latest courses at https://courses.harvard.edu/index.html

Course Listing	Title	Semester	Credits
HMS HT030	Human Pathology	Fall	4
HMS HT080	Hematology	Spring	2
FAS 24657 Cell Biology 301qc	The Epidemiology and Molecular Pathology of Cancer	Jan	2
HMS CB201	Principles of Cell Biology	Spring	4

Typical AAOMP AGE Student Course Schedule:

These are required courses for the Oral and Maxillofacial Pathology program.
Courses marked with an asterisk (*) fulfill the HSDM Oral Biology Core requirement (minimum 12 credits).

	HSDM Courses		Non HSDM Courses	
	Fall	Spring	Fall	Spring
Year 1	OB608.CBS Graduate Head & Neck Anatomy *(July, 2 weeks) (3 cred) OB602.CBS* Oral Immunology (3 cred) BST 201 at HSPH Biostatistics (4 cred) IDP602.IN Introduction to Research (1 cred) OPB601. Diagnostic Oral & Maxillofacial Histopathology * OPB 605. Oral and Maxillofacial Pathology Seminar (3 cred) **IDP604.00:** Foundations for the Advanced Dental Practitioner IDP500.IN Multidisciplinary Case Presentation	OB610.CBS* Advanced Oral Medicine, Pathology, and Radiology IDP600.IN AGE Research Seminar Series OB614.CBS Mineralized Tissue Biology and Diseases OB611.CBS Craniofacial Development and Genetics **OB610.CBS:** Adv Oral Med, Path and Radiology OP601 Diagnostic Oral & Maxillofacial Histopathology OPB 605. Oral and Maxillofacial Pathology Seminar	HMS HT030 Human Pathology (4)	HMS HT080 Hematology (2), 2nd part of Spring semester

Year 2	OPB 701 Diagnostic Oral & Maxillofacial Histopathology OPB 705. Oral and Maxillofacial Pathology Seminar OM 601 Oral Medicine Seminar IDP501.IN Multidisciplinary Case Presentation Baseline Oral Medicine Exam	OPB 701 Diagnostic Oral & Maxillofacial Histopathology OPB 705. Oral and Maxillofacial Pathology Seminar IDP 700.IN AGE Research Seminar Series	Variable	General Surgical Pathology Clinical Pathology
Year 3 Year 4	OP801 (OPB 901) Diagnostic Oral & Maxillofacial Histopathology OPB 805 (OPB 905). Oral and Maxillofacial Pathology Seminar IDP502.IN Multidisciplinary Case Presentation	OP801 (OP 901) Diagnostic Oral & Maxillofacial Histopathology OPB 805 (OPB905). Oral and Maxillofacial Pathology Seminar IDP800.IN (IDP900.IN) AGE Research Seminar Series	Research	Research

SEMINARS AND GRAND ROUNDS

OMP Seminar

Seminars are held every other Wed (alternating with the Oral Medicine Seminar) in the morning, usually from 9.00 am to noon, depending on whether students are also taking didactic coursework. This consists of a Core Lecture and Journal Club. This takes place at One Brigham Circle (OBC) in the 3rd floor conference room in the academic offices of our Division. This is a focused review and discussion on all the major topics in AAOMP (see Reading Schedule below). The schedule is prepared by the senior student and all students are assigned topics for these Core Lectures which are presented via Powerpoint with review of the important “classic” and new articles related to that topic. It is extremely important that the student comes well-prepared with background knowledge since the discussion is at a post-doctoral level. Journal assignments are made by the senior

student/resident. Approximately 20 min is spent at the end of the sessions going over clinical cases collected over the years.

For Journal Club, current articles are summarized in 2-3 sentences, providing the most salient features of the article. Good articles will be uploaded onto the HMS shared drive, as is the Core Lecture. Students may use previously presented Core Lectures updating as necessary rather than formulating a new lecture.

Oral Medicine Seminar

Seminars are every other Wednesday, from 10-12 am, at One Brigham Circle, 3rd floor conference room. The seminar series includes core lectures, in-depth review of relevant topics, case reviews, and critical analysis of the literature. The annual schedule is prepared by the senior student/resident in consultation with the Program Director. A select number of guest speakers are invited throughout the year. Advanced reading of assigned articles and preparation of Power Point presentations (as appropriate) are mandatory. As an OMP student, students will be required to attend one semester of this, and present one lecture. After that, they are free to attend any of these seminars and especially the lectures given by guest speakers. The Oral Medicine chief resident organizes this.

Attendance at the OMP seminars is mandatory and attendance at the Oral Medicine seminars is highly recommended. The only exceptions are if you are taking *courses or clinical rotations that directly conflict, or during research experiments* that require attention during seminar time. Students must always discuss potential conflicts with the Program Director if there are any questions.

Recommended reading

1. JAMA series: A user's guide to the medical literature. Articles I-XV. 1993
2. Riegelman RK, Hirsch RP: Studying a study and testing a test: How to read the health science literature (Third edition. Boston: Little, Brown and Co., 1996.
3. Macrina FL: Science integrity. Washington, DC: American Society for Microbiology, 1995.
4. Norman GR, Streiner DL: Biostatistics: the bare essentials. St. Louis, Mosby Year Book, Inc., 1994.
5. Williams JM: Style: Ten lessons in clarity and grace, Fifth edition. New York, Addison Wesley Longman, Inc., 1996.

Oral Medicine Grand Rounds

Oral Medicine Grand Rounds meets the first Wednesday of every month from 8-9am, One Brigham Circle, 4th floor conference room. Attendance and regular presentations throughout the program are mandatory. Presentations should include adequate background and introduction, concise presentation of the case, including all pertinent laboratory, histopathology and radiology studies, and a review of the literature. Two cases are typically presented, with each taking approximately 30 minutes. The senior student/chief resident in oral medicine will distribute a schedule at the start of the academic year. All oral pathology students are required to present at this.

Craniomaxillofacial Pathology Conference

Craniomaxillofacial conference meets the fourth (this may vary) Friday of every month from 7-8 am at Children's Hospital, Boston, Garden Conference Room. Attendance and regular presentations throughout the program are mandatory. Preparation includes coordination with oral surgery and/or craniofacial plastic surgery residents and taking representative photomicrographs of the cases being presented. A brief review of the condition including immunoprofile and genetic markers must be presented. Two to three cases are typically presented.

Other Activities

Among the various hospitals and institutions, there is a wealth of learning opportunities in the form of lectures, seminars, and special events. Many events are publicized via email, but students should also review print and electronic bulletins for learning opportunities. Many departments and research programs have regularly scheduled seminar series, all of which are open to the community.

ORAL HISTOPATHOLOGY SIGNOUT AND SEMINARS

This is one of the most important aspects of your training and where you will learn to be a competent pathologist. Commitment to critical reading and time at the microscope are the cornerstones of this specialty. OMP is a specialty that requires much thinking and analysis and less "doing", and is one of the more intellectually challenging specialties. It is important to read widely and constantly without prompting by me.

Obviously, the more histopathology you are exposed to, the better a diagnostician you will be and you should motivate yourself to spend as much time as possible at the microscope whether at StrataDx or at HSDM where there is a multi-headed microscope. Students in our program spend at least one day a week (Thursday usually, when they are not at mandatory or elective rotations), and usually two days a week at StrataDx . These are Tuesdays and Thursdays when I am there.

StrataDx Inc. is a commercial surgical pathology laboratory that is based at 1 Cranberery Hill, Lexington, MA. You will get there by taking the Red line to Alewife, and then using an Uber cab to take you the rest of the 8 miles. To make the best use of your time, use this travel time well when you will be able to read journal articles, or work on your manuscripts.

Carry a notebook with you to all seminars and all meetings, or use a computer or tablet, rather than writing on scraps of paper. You will need to take a lot of notes throughout your years here.

Sign-out sessions

"Sign-outs" are when the attending pathologist dictates the report that will go out to the doctor who took the biopsy. At StrataDx, we use voice recognition software and "expanded phrases" that are standard phrases for both the microscopic description and the diagnosis. This reduces typographical errors and turnaround time. Each pathologist has his/her own style and students should sit with each of the pathologists to find out how the styles differ or not as the case may be. Most dermatopathologists and other pathologists at the Boston

Hospitals do not routinely use a microscopic description. They only provide the diagnosis and a "Comment" or "Note" if there are unusual features that warrant it.

Writing up cases

Before you can do any write-ups, you must receive training in security and HIPAA at Strata. This is a fairly simple procedure, and a password will then be given to you, so that you can access the patient's case and type in the microscopic description and the diagnosis.

Students will be given cases to describe at every session. This is an exercise that allows us to evaluate a student's progress in using the language of pathology, and diagnostic skills in recognizing patterns and cells. Here are guidelines on how to describe a lesion. Please follow these instructions. You may use descriptions or not or use a different style when you graduate, but when you are in the program, this is how the cases should be described.

How to describe a plaque or macular lesion (such as lichen planus or leukoplakia)

1. The oral mucosa is covered by a …… (thin, moderate or thick) layer of …….(ortho or para or both) keratin. The spinous layer is …….. (atrophic, or the usual thickness, varies in thickness)

2. Describe the spinous layer. Is there spongiosis, or leukocyte exocytosis, squamatization of the basal cells or anything else going on? If there is atypia or dysplasia, and if so, describe this. If not, say: ….. and the epithelium maintains the usual pattern of maturation.

3. Describe the lamina propria – is there inflammation? Is this mild , moderate or severe? Is it acute or chronic? What cells are present – neutrophils, lymphocytes, plasma cells, eosinophils, histiocytes etc. Remember that the oral mucosa has no submucosa since there is no muscularis mucosa.

Finally, give the diagnosis. For all such flat lesions that are NOT space-occupying, provide an EXACT site, and the procedure. If no procedure is checked on the requisition, use the term "biopsy". For example:

Right buccal mucosa, tooth #18 area, biopsy: lichen planus

How to describe a cyst

1. Start with what the cyst is lined by. Eg. The cyst is lined by …….. (keratinized or non-keratinized stratified squamous epithelium, pseudostratified squamous epithelium, or low cuboidal to columnar epithelium). Describe how thick this epithelium is and is it uniform. Is there something going on in the epithelium (spongiosis, leukocyte exocytosis, presence of Rushton bodies).

2. Describe the wall. Is it inflamed? If so, is the inflammation mild, moderate or severe? What inflammatory cells are present? Is there anything else present?

3. Do you see bone, and if so, what kind of bone? Is there muscle? Foreign material etc. Since cysts occupy space, they should be signed out as "soft tissue". For example:

Soft tissue associated with impacted #17, excision: dentigerous cyst with chronic inflammation

Soft tissue, right ventral tongue, excision: oral lymphoepithelial cyst

How to describe a tumor or neoplastic process

1. Start by describing what the proliferating tissue is. The section or the tumor consists of a ……. (encapsulated or nonencapsulated) proliferation of or mass of …….. (spindled cells, fibrovascular tissue, giant cells etc).

2. What is the low-power pattern of growth (sheets, islands, fascicles, single cells infiltrations, ducts etc). Is there necrosis or hemorrhage?

3. Describe the tumor cell(s), starting with the whole cell – the shape and size. Are cell borders distinct? Describe the cytoplasm, then the nucleus, number of nucleoli, whether the chromatin is clumped or dispersed, and mitotic activity. All neoplasms must have a comment about margins. Here are two descriptions.

The section consists of a discrete but nonencapsulated proliferation of multinucleated giant cells present in sheets. The giant cells are interspersed with mononuclear cells and there is abundant fresh hemorrhage; siderophages are noted. The mononuclear cells have spindled or fusiform nuclei and occasional normal mitotic figures are noted. A grenz zone separates the lesion from the overlying epithelium which is focally ulcerated.

Diagnosis: Soft tissue, buccal gingiva between teeth #7 and 8, excision: peripheral giant cell granuloma, ulcerated, extending to the tissue edges.

Note: When incompletely excised, giant cell granulomas have a recurrence rate of approximately 15%.

Here is a description of a malignant neoplasm

The section consists of fragments of a salivary gland tumor. This is composed of an unencapsulated proliferation of a single isomorphic cell population that forms sheets, strands, trabeculae, duct-like structures, and islands of cells. Superficially, near the epithelium, the cells are present in single file in the connective tissue. Tumor cells directly invade the underlying remnant salivary gland tissue. The cells have moderate amounts of pale cytoplasm and cell borders are indistinct. The nuclei are round to ovoid and occasional single nucleoli are seen. The chromatin is finely dispersed. Mitotic activity is not noted. Perineural invasion is identified.

Diagnosis: Soft tissue, right hard palatal mucosa, biopsy: fragments of polymorphous low-grade adenocarcinoma, with perineural invasion.

How to provide a differential diagnosis

It is very important that you develop a discerning eye for pathology. As with all things, this takes practice. It is more important to me that you can correctly describe and identify what you see, that to randomly stab at a diagnosis. After examining a lesion and if you still do not know what it is, you should at least decide whether it is “reactive/inflammatory”, “benign neoplastic” or “malignant neoplastic”. **I WILL NOT ACCEPT A STATEMENT**

OF "I DON'T KNOW WHAT THIS IS". You must put it into one of the above categories. If it is a neoplasm, you should state what you think the differentiation is – epithelial, vascular, lipomatous, smooth muscle etc. Then provide me with a working diagnosis, and at least 3-4 differential diagnoses. For each differential diagnosis, you must be able to tell me why you favored your first diagnosis over your differential diagnoses.

To be able to accomplish this, you will need to read broadly and constantly.

Text books

There are many text books and journals at the office that you can use for your training. However, I do strongly recommend that you purchase two text books: Neville et al: Oral and Maxillofacial Pathology, and Woo: Oral Pathology: An atlas and comprehensive text. They will be the primary text books that you use. When you are at the General Anatomic/Surgical Pathology rotation, you will also use text books specific to other organ systems.

Other text books that you should use during your training include the following:

Gnepp D. Diagnostic Surgical Pathology of the Head and Neck.

Wenig BM. Atlas of Head and Neck Pathology with CD-ROM

Fletcher CDM. Diagnostic Histopathology of Tumors: 2-Volume Set with CD-ROMs

Weiss S. Enzinger's Soft tissue Pathology

Weedon D. Skin Pathology

McKee, Phillip, Calonje, E. Pathology of the Skin: With Clinical Correlations

Bullough PG. Orthopaedic Pathology

Hornick JL: Practical Soft Tissue Pathology: A Diagnostic Approach

Rotations and Clerkships

These are General Anatomic/Surgical Pathology, Clinical Pathology (7-8 months) and Oral Medicine (3 months). In addition, you should also rotate through head and neck and skin pathology for one month each (beyond the 2 weeks of head and neck and skin pathology that you would have already done during the General Anatomic/Surgical Pathology rotation) to give you more experience. As such, you will spend almost 1 year off-site and away from Lexington.

General Anatomic/Surgical Pathology

This is a 7-month full-time rotation that takes place in the Department of Pathology at the BWH. During this rotation, you will assist in the performance of autopsies (minimum of 10 autopsies), and rotate through all the

different general and specialized pathology sections such as obstetric/gynecologic, lung, genito-urinary, breast, gastrointestinal, hematologic, cytopathology and molecular pathology. You will also rotate through skin and ENT pathology but will also get additional training in these two specialties at MEEI and StrataDx.

You must keep a log your activities during your General Anatomic/Surgical Pathology rotations, especially of every autopsy that you did (including the diagnosis and findings, and if possible, a copy of the autopsy report with the patient's name blacked out). Please see the last page of this for the log that you must fill out and have the attending pathologist sign (for each autopsy); this confirms your presence since your name does not usually appear on the report. It is not necessary to keep a log of all the surgical cases you saw, but if you performed a procedure on a patient such as a fine needle aspiration, this must be logged. The reason a log is kept is so that we can evaluate whether you have had a wide experience that we require for you to be competent in your field, and for accreditation of our program.

Clinical Pathology

You will rotate for 1 month through the Clinical Pathology services. For each of four weeks, you will be exposed to basic concepts of Microbiology, Virology, Blood-banking, Chemistry and Hematology.

Oral Medicine

You are required to spend a minimum of 3 months in one-block so that you have time to see follow-ups and the effects of treatment. This rotation takes place at the Division of Oral Medicine and Dentistry at the BWH. This is the only time when you will actually have a chance to see patients with a variety of mucosal diseases. Since many OMP specialists see patients as part of their practice, this exposure will help you be comfortable taking a biopsy and prescribing medications to treat common and uncommon oral conditions. The Board examination will also have areas focused on patient management. The BWH uses an electronic medical record system (Epic) and this rotation will help you to understand how to use such a system for patient record-keeping, communication with other doctors and prescribing medications.

A white coat and photo ID must be worn during all Oral Medicine rotations. Please be sure that every patient encounter is logged (Appendix), including all first visit consultations and all follow-up visits, and any procedures performed (such as biopsies or fine needle aspirations). Please behave in a professional manner at all times. Smart phones may only be used to look up medications and perform functions as necessary for working up the patient.

You are encouraged to take the Fellowship examination which is administered by the American Academy of Oral Medicine at their annual meeting, if you are interested in patient care. You will need to have attended at least two annual meetings to be eligible to take this examination.

RESEARCH REQUIREMENTS

When you get you ID for the BWH, you must complete your CITI training for research. Go to https://www.citiprogram.org/ and complete your training. Without this, you will not be able to perform any research at the BWH.

Please refer to the **HSDM Student Handbook** and the Office of Research webpage at the HSDM website (www.hsdm.harvard.edu) for details on the DMSc (or other relevant) research requirements and deadlines. All research related questions should be initially directed to the Office of Research.

It is highly recommended that fellows complete 1-2 laboratory rotations prior to identifying a thesis laboratory and mentor. In addition to exposure to research faculty during courses/seminars, and the resources available through the Office of Research at HSDM, here are a few Harvard websites that are of use in identifying potential research laboratories and mentors:

Harvard School of Dental Medicine *DMSc Research Guidebook*
Harvard Medical School Division of Medical Sciences Faculty: http://www.hms.harvard.edu/dms/faculty.html
The Harvard Catalyst: http://connects.catalyst.harvard.edu/PROFILES/SearchProfiles.aspx
Research at Dana-Farber Cancer Institute: http://www.dana-farber.org/res/

Journals you must read regularly

Access to the Countway Library gives you access to all the online journals in the system. This is an important resource for your training. Some journals that you should check regularly and that we will be reviewing include:

Oral Surg Oral Med Oral Pathol Oral Radiol (referred to as “Triple O” or “Quad O”), Head Neck Pathol, JADA, B Dent J, NEJM, Oral Dis, Oral Oncol, J Oral Pathol Med, Am J Surg Pathol, Arch Dermatol, J Am Acad Dermatol, Histopathol, Mod Pathol, Human Pathol, Lancet to name just a few.

Log of Autopsy cases for Oral Pathology Resident

Resident Name: _____ Date of Rotation: _____

Autopsy number/Date	Diagnosis	Attending Pathologist	Attending Signature

Log of Oral Medicine cases for Oral Pathology Resident

Resident Name: _____ Date of Rotation: _____

Patient MRN/last name	Date of Visit	Diagnosis	Treatment	DMD

Harvard Medical School/Harvard School of Dental Medicine
Format for the Curriculum Vitae

Date Prepared:

Name:

Office Address:

Home Address:

Work Phone:

Work Email:

Work FAX:

Place of Birth:

Education

Postdoctoral Training

Faculty Academic Appointments

Appointments at Hospitals/Affiliated Institutions

Other Professional Positions

Major Administrative Leadership Positions

Local

Regional

National and International

Committee Service

Local

Regional

National and International

Professional Societies

Grant Review Activities

Editorial Activities

Other Editorial Roles

Honors and Prizes

Report of Funded and Unfunded Projects

Funding Information

Past

Current

Current Unfunded Projects

Report of Local Teaching and Training

Teaching of Students in Courses

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

Clinical Supervisory and Training Responsibilities

Laboratory and Other Research Supervisory and Training Responsibilities

Formally Supervised Trainees

Formal Teaching of Peers (e.g., CME and other continuing education courses)

Local Invited Presentations

Report of Regional, National and International Invited Teaching and Presentations

Regional

National

International

Report of Clinical Activities and Innovations

Current Licensure and Certification

Practice Activities

Clinical Innovations

Report of Technological and Other Scientific Innovations

Report of Education of Patients and Service to the Community

Activities

Educational Material for Patients and the Lay Community

Books, monographs, articles and presentations in other media

Educational material or curricula developed for non-professional students

Patient educational material

Recognition

Report of Scholarship

Peer reviewed publications in print or other media

Non-peer reviewed scientific or medical publications/materials in print or other media

Professional educational materials or reports, in print or other media

Clinical Guidelines and Reports

Thesis

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

Narrative Report