



**BASIC STANDARDS  
FOR  
SUBSPECIALTY TRAINING  
IN  
MOHS MICROGRAPHIC SURGERY**

**American Osteopathic Association  
and the  
American Osteopathic College of Dermatology**

September, 1992  
BOT/93

BASIC STANDARDS  
FOR  
RESIDENCY TRAINING  
IN  
MOHS MICROGRAPHIC SURGERY

ARTICLE I - OBJECTIVES

The subspecialty program emphasizes training in Mohs Micrographic Surgery (MMS) for the treatment of specific cutaneous malignant neoplasms where the procedure has been documented to be of significant benefit. The training program includes comprehensive teaching of principles of cutaneous oncology, cutaneous surgical anatomy, appropriate diagnostic modalities, proper patient selection, preoperative evaluation, proper procedural documentation, surgical technique, instrumentation for dermatologic surgery, field block and regional local anesthesia, hemostasis, surgical microbiology, pertinent surgical dermatopathology, MMS laboratory principles/procedures, surgical and laboratory biohazard safety principles and procedures and selection/ performance of surgical wound management utilizing recognized techniques such as secondary intention healing, primary closures, adjacent tissue transfer procedures (skin "flaps") and skin grafting procedures. Completion of the program is also expected to enhance the knowledge, expertise and experience of the trainee in standard dermatologic surgery through comprehensive training in excisional surgery and repair, electrosurgery, cryosurgery, cutaneous laser surgery, dermabrasion, scar revision techniques and therapeutic chemical peeling. The ultimate goal of the program is to allow the trainee to emerge into a knowledgeable and skillful Mohs micrographic surgeon/dermatologic surgeon who has a sound understanding of cutaneous malignancy and premalignancy, a thorough knowledge of indications and methods of treatment and expertise in surgical technique and laboratory procedures.

The trainee will learn through observation and direct patient experience under the supervision of competent physician-teachers, formal didactic sessions and an organized reading program. It is expected that the trainee, after completion of the program, would be prepared and eligible to complete subspecialty Board Certification examination in MMS given by the American Osteopathic Board of Dermatology.

ARTICLE II - REQUIREMENTS FOR ADMISSION TO THE PROGRAM

- A. The trainee must be a graduate of an osteopathic medical school accredited by the AOA.
- B. The trainee must have completed an AOA-approved internship.
- C. The trainee must have satisfactorily completed a three (3) year dermatology training program (residency, preceptorship) approved by the American Osteopathic Association (AOA) and American Osteopathic College of Dermatology (AOCD). The trainee must be Board Eligible or Board Certified in Dermatology by the AOA and American Osteopathic Board of Dermatology (AOBD).

ARTICLE II - REQUIREMENTS FOR ADMISSION TO THE PROGRAM (cont'd)

- D. The trainee must be a member in good standing of the AOA and AOCD.
- E. The trainee must have appropriate medical licensure in the state where the training program is based.
- F. The trainee must meet the program requirements that are mandated or adopted by the program director and training institution.
- G. Prior to admission into this subspecialty program, the trainee must present a letter of recommendation from the Director of Medical Education at the hospital where he/she completed their AOA-approved internship.

ARTICLE III - DEPARTMENTAL RESOURCES

- A. The base training institution should be a facility with an organized department of dermatology or be affiliated with an existing dermatology training program.
- B. The base site must have available local access to a medical library and organized departments or sections of pathology, radiology, reconstructive surgery (plastic surgery and/or head and neck reconstructive surgery, general surgery), radiation oncology and medical oncology.
- C. An affiliated department of pathology must be available in the local vicinity of the base institution to allow for both teaching of pertinent dermatopathologic findings and integration of clinical manifestations with gross and microscopic pathology. The trainee will participate actively in dermatopathology training, especially all cases that relate to a surgical procedure to be performed.
- D. A fully equipped MMS laboratory, registered in compliance with federal Clinical Laboratory Improvement Act (CLIA) regulations, and staffed by a certified histology technician, is to be affiliated with and located within the local vicinity of the base institution for proper consistent exposure of the trainee to the principles and practice of tissue processing for MMS.
- E. There must be an adequate medical library that includes adequate space for quiet study as well as current textbooks, periodicals and audiovisual aids relating to MMS, cutaneous oncology, dermatologic surgery, dermatology, surgical anatomy, surgical technique,

dermatopathology and all other pertinent subject areas as presented in the above section entitled (I) OBJECTIVES - OVERVIEW.

- F. A trained and competent Mohs micrographic surgeon must either serve as program director or must serve as an active, full time faculty participant affiliated with the base institution. All procedures included in the training program must be taught and supervised by physician-faculty who have training, expertise and clinical experience in performing the procedure(s).

#### ARTICLE IV - PROGRAM DIRECTOR REQUIREMENTS

The program director must:

- A. Be certified in Dermatology by the AOA through the AOBD.
- B. Be a member in good standing of the AOA and AOCD.
- C. Have been in practice full time in dermatology and dermatologic surgery for at least five (5) years after completion of his/her residency/preceptorship in dermatology approved by the AOA and AOCD.
- D. Be qualified to teach by nature and temperament.
- E. Be capable of teaching a comprehensive MMS and dermatologic surgery program through his/her own training, expertise and experience and through available faculty affiliated with the training program and/or base institution.
- F. Be appropriately licensed and have met continuing medical education (CME) requirements.
- G. Provide and oversee a comprehensive training program on a consistent basis.
- H. Monitor the progress of the trainee and provide feedback with written documentation to the trainee to be certain that educational expectations and performance goals are achieved on a quarterly basis.
- I. Submit annual reports to the AOA and AOCD regarding the training program and trainee.

#### ARTICLE V - THE SUBSPECIALTY PROGRAM

- A. The minimum training period in MMS will be twelve (12) continuous months for didactic and clinical training in MMS and associated wound management procedures such as secondary intention healing, primary closure, adjacent tissue transfer procedures and skin grafting procedures. The program may also include training in basic and advanced dermatologic surgery including but not limited to scar revision, dermabrasion and cutaneous laser surgery. An additional twelve (12) months may be added for programs that include more thorough and advanced training and experience. The program must include formal didactic education in critical subject areas felt to

be part of the core didactic curriculum. The trainee may elect to continue his/her program for an additional twelve (12) months in order to receive additional training and experience and/or to continue a program-related research project. This option must be approved in advance by the program director, the AOA and the AOCD.

- B. The major goal of the training program shall be to provide comprehensive education, training and experience in MMS and dermatologic surgery. This will be accomplished through an in-depth formal educational program and intense "one on one" case observation and "hands on" supervised teaching. Upon completion of training, the trainee should be qualified and confident to develop (i) a successful MMS and dermatologic surgery practice and (ii) a quality academic setting for participation in training of future trainees.

ARTICLE V - THE SUBSPECIALTY PROGRAM (cont'd)

C. In addition to didactic and clinical training of MMS and other procedures included in the training program, the educational program must include training in the following areas and achieve specific standards as noted below:

1. Surgical Anatomy: Every trainee will participate in a course of cutaneous surgical anatomy of the head and neck and other pertinent areas of regional anatomy organized by the program director or designated faculty member at the base institution. It is encouraged that the trainee complete a recognized cutaneous surgical anatomy course (i.e., available at a major national convention).
2. Dermatopathology: The trainee will participate in ongoing education in pertinent histopathology. Histologic slides obtained through preoperative biopsies will be reviewed by the trainee (when they are available) prior to performing the surgical procedure planned for the patient. In addition, the trainee will receive instruction in histologic interpretation of MMS frozen sections through "one on one" instruction by the Mohs micrographic surgeon. Before completion of the program, the trainee is required to independently *interpret and map* the histologic sections from a minimum of fifty (50) cases of MMS after which the trainee will be evaluated for accuracy of work by the Mohs micrographic surgeon. Principles of surgical pathology and dermatopathology are to be consistently emphasized through assigned reading and formal didactic sessions.
3. Mohs Micrographic Surgery Laboratory: The trainee will receive thorough training in the development and maintenance of a MMS laboratory. This training will include both didactic discussions and "hands on" experience in MMS tissue mapping, color coding, tissue cutting, tissue embedding, frozen section processing of tissue sections, slide preparation, staining and slide storage. Accepted guidelines of equipment maintenance, laboratory safety and management of biohazardous infectious and chemical waste will be taught throughout the program emphasizing compliance with CLIA and OSHA regulations.
4. Patient Selection: Principles of preoperative evaluation and proper patient selection are to be emphasized consistently throughout the program. This is to include training in pertinent history and physical findings, indications, contraindications, available treatment options including their

risks versus benefits as applied to each case, patient education and proper informed consent related to whatever procedure is to be performed. Training in complete and accurate chart documentation of the above is to be included as an integral part of the training program.

ARTICLE V - THE SUBSPECIALTY PROGRAM (cont'd)

5. Mohs Micrographic Surgery: The trainee must actively participate in a minimum of two (2) hundred twenty-five (225) cases of MMS during the training program. The trainee must perform under direct supervision a minimum of seventy-five (75) cases of MMS as the primary Mohs micrographic surgeon. Before completion of the program, the trainee is required to independently *interpret and map* the MMS histologic sections from a minimum of fifty (50) cases of MMS that the trainee has actively participated in, after which the trainee will be evaluated for accuracy of work by the attending Mohs micrographic surgeon. The trainee is required to maintain a surgical log of all cases of MMS that he/she has participated in. The log must also clearly indicate which cases were completed by the trainee as the primary surgeon under supervision by the attending Mohs micrographic surgeon (note: a minimum of seventy-five (75) cases required) and which cases were independently interpreted and mapped by the trainee prior to checking by the attending Mohs Micrographic Surgeon (note: a minimum of fifty (50) cases required). The log is to include the surgical case number (or another method of confidential patient/chart identification), date, diagnosis, preoperative lesion size, postoperative wound size, number of MMS stages and tissue sections per stage and the method of wound management.
  
6. Reconstructive Surgery: The trainee will be taught principles of tissue movement and will be thoroughly educated in wound management and reconstructive surgical procedures utilized to repair wounds that result after all microscopic tumor foci have been removed by MMS. This includes secondary intention healing, primary closure, adjacent tissue transfer procedures (i.e., skin flaps) and skin grafting procedures (i.e., full thickness, split thickness, composite). The trainee must actively participate in at least seventy five percent (75%) of all cases of reconstructive surgery performed on patients that have undergone MMS and subsequently undergo reconstructive surgery by the attending Mohs micrographic surgeon. This applies only to cases of MMS in which the trainee has actively participated. The trainee is also encouraged to actively participate in reconstructive procedures performed by a member of the consultant staff (i.e., plastic surgery, head and neck surgery, etc.) and is also given credit for this participation toward the "75% requirement" mentioned above. The trainee is required to maintain a complete log of all cases of

reconstructive surgery in which he/she participates. The log must include a surgical case number (or another method of confidential patient/chart identification), diagnosis, date, preoperative wound size and description of the type of reconstructive procedure performed.

7. Cardiopulmonary Resuscitation (CPR): The trainee must complete a course in CPR (advanced CPR) approved by the American Heart Association and maintain active CPR certification throughout the training program.

ARTICLE V - THE SUBSPECIALTY PROGRAM (cont'd)

8. Additional Specific Didactic Requirements: The trainee must complete an organized didactic course (assigned reading program and formal discussions) throughout the program designed to thoroughly cover a core education curriculum. Discussion time must be regularly scheduled with the program director or designated faculty member knowledgeable in the area(s) under discussion. Assignments are taken from a collection of "classic" and current readings from texts or journals chosen by the program director or faculty member. This program must include principles of surgical anatomy (discussed above), wound healing, surgical microbiology, proper preparation and use of surgical instruments and supplies, preoperative evaluation pertinent to specific surgical procedures, surgical technique, control of hemostasis, basic principles of cutaneous tissue movement and repair, local anesthesia, handling of postoperative complications, principles of surgical pathology, MMS laboratory procedures and biosafety precautions and regulations. Emphasis is to be placed on didactic training in cutaneous oncology, diagnostic methods, available treatment modalities, MMS, secondary intention healing, reconstructive surgery procedures and surgical pathology/MMS laboratory principles and procedures throughout the program. A formal, organized reading list with specific assignments is to be made available to the trainee by the program director. Additional reading assignments may be added when deemed appropriate by the program director or faculty member especially when applied to education situations related to a specific clinical case or when an important advancement or discovery is reported in current pertinent literature.
9. Journal Club: A monthly journal club is to be held, reviewing pertinent current articles from both dermatologic and non-dermatologic periodicals. The trainee may also be assigned specific articles to review from past literature.
10. Teaching Responsibilities: The trainee is expected to teach topics related to cutaneous oncology, MMS and related aspects of dermatologic surgery to residents, interns and medical students when present on rotation.
11. Procedures Other Than MMS: The training program must provide thorough didactic exposure to any dermatologic surgery procedure taught under the auspices of the training program.

As noted earlier, such procedures may include standard dermatologic surgical procedures (i.e. curettage, excisional surgery, electrosurgery, cryosurgery), scar revision, cutaneous laser surgery, therapeutic chemical peels and dermabrasion. The program director must include in the formal didactic program a thorough review of all pertinent surgical anatomy, tissue biology, indications, contraindications, patient selection, preoperative evaluation, surgical technique, surgical pathology and dermatopathology (when pertinent) and management of potential complications related to all procedures taught in the training program. The trainee must maintain a detailed surgical log of all procedures in which he/she participates throughout the training program.

ARTICLE V - The Subspecialty Program (cont'd)

12. Procedure Documentation: The trainee is required to prepare an operative report on all procedures that he/she completes as the primary surgeon. The program director or designated faculty member must review and discuss these operative reports with the trainee, reviewing for clarity, accuracy and completeness. The main purpose of this activity is to constructively critique the reports and provide a valuable educational experience for the trainee.
13. Continuing Education: The trainee may attend didactic courses related to the educational objectives of the MMS training program (i.e. MMS, surgical anatomy, cutaneous oncology, etc.) outside the base institution as part of the training program as long as the program is approved in advance by the program director. The trainee may be allowed to complete a maximum of two (2) months elective rotation away from the base institution per twelve months (one calendar year) of participation in the training program. For trainees who are completing an extended program beyond two (2) years, additional elective time may be approved by the program director. All elective rotations are subject to approval by the program director in advance of their completion and must relate to the educational objectives and meet the requirements of the training program and the AOCD.
14. Work Hours: The trainee is expected to actively attend and participate in the training program for a maximum of sixty (60) hours per week. Up to fifty (50) hours per week may be dedicated to service (patient care) hours and a minimum of ten (10) hours per week must be dedicated to formal didactic teaching.

ARTICLE VI - RESIDENT REQUIREMENTS

- A. Special attention must be given to medical manuscript preparation suitable for publication. The trainee must prepare at least one (1) manuscript per twelve months of training. Each manuscript must be suitable for publication in a professional medical journal and must be prepared under the supervision of the program director.
- B. The trainee may pursue a research endeavor as long as it relates to the subspecialty of MMS or cutaneous oncology and is approved by the program director.

- C. The training program is a full time program and must be documented on an annual basis through submission of annual training logs and reports submitted to the AOCD Education Evaluating Committee and the AOA.
  
- D. In addition to the log requirements noted above, it is advised that the trainee utilize the procedure log system provided by the American Academy of Dermatology and the American Society for Dermatologic Surgery.

## APPENDIX I

### MODEL HOSPITAL POLICY ON ACADEMIC AND DISCIPLINARY DISMISSALS

In July, 1993, the Board of Trustees of the American Osteopathic Association adopted the following policy:

The hospital and department have clearly defined procedures for academic and disciplinary action. Academic dismissals result from a failure to attain a proper level of scholarship or non-cognitive skills, including clinical abilities, interpersonal relations, and/or personal and professional characteristics. Institutional standards of conduct include such issues as cheating, plagiarism, falsifying records, stealing, alcohol and/or substance abuse, or any other inappropriate actions or activities.

In cases of academic dismissal, the hospital and department will inform trainees, orally and in writing, of inadequacies and their effects on academic standing. The trainee will be provided a specified period in which to implement specified actions required to resolve academic deficiencies. Following this period, if academic deficiencies persist, the trainee may be placed on probation for a period of three (3) to six (6) months. The trainee may be dismissed following this period, if deficiencies remain and are judged to be unremediable. In accordance with institutional policy, the trainee will be provided an opportunity to meet with evaluators to appeal decisions regarding probation or dismissal. Legal counsel at hearings concerning academic issues will not be allowed.

In cases of disciplinary infractions that are judged unremediable, the hospital and department will provide the trainee with adequate notice, in writing, of specific ground(s) and the nature of the evidence on which the disciplinary action is based. The trainee will be given an opportunity for a hearing in which the disciplinary authority will provide a fair opportunity for the trainee's position, explanations and evidence. Finally, no disciplinary action will be taken on grounds which are not supported by substantial evidence. The department and/or hospital intern training committee, or house staff education committee, or other appropriate committees will act as the disciplinary authority. Trainees may be allowed counsel at hearings concerning disciplinary issues. Pending proceedings on such disciplinary action, the hospital in its sole discretion may suspend the trainee, when it is believed that

such suspension is in the best interests of the hospital or of patient care.