

Application for Subspecialty Certificate

(for a subspecialty new to the Boards Community)

Upon completion, please forward this application for a new or modified subspecialty certificate to Richard E. Hawkins, MD, ABMS President and Chief Executive Officer, in care of David B. Swanson, PhD, at dswanson@abms.org. If you need any assistance with the completion of this application, please contact Paul Lawlor, Manager, Program Review and services, at plawlor@abms.org.

Board

Contact Name

Email

Phone

1. Provide the name of the proposed new or modified subspecialty certification:

2. State the purpose of the proposed new or modified subspecialty certification in one paragraph or less:

The purpose of certifying diplomates of ABD in MDS is to assure that patients with advanced skin cancer can identify and access physicians with this subspecialty expertise. The subspecialty and its training programs have been in existence for 50 years and have evolved from a unique surgical technique to a subspecialty with a broad body of knowledge and tools through a merger of specialized clinical, pathological and surgical dermatology skills to manage the epidemic of skin cancer. ABD seeks to recognize and confirm the competence of dermatologists certified by the ABD who have completed one year of fellowship training in the subspecialty accredited by the ACGME since 2004. To do this, ABD will administer a secure, psychometrically valid examination and create a program for maintenance of certification. In addition, a practice pathway for subspecialty ABD certification of those trained in comparable programs prior to ACGME accreditation, as well as for those who have gained this experience in practice, is also proposed.

3. Document the professional and scientific status of this special field by addressing (a) through (e) below.

a. In the space provided, please describe how the existence of a body of scientific medical knowledge underlying the proposed new or modified subspecialty area is in large part distinct from, or more detailed than, that of other areas in which certification is offered:

The discipline integrates knowledge and skills in clinical dermatology, surgical dermatology, dermatopathology, and basic science related to carcinogenesis and cancer treatment, building on competencies developed during dermatology residency training, but expanded in scope, complexity, and experience. This unique body of scientific medical knowledge for educational purposes is described in the ACGME program requirements, for which the title Micrographic Surgery and Dermatologic Oncology (MSDO) is used (ATTACHMENT 1). The Journal of the American Academy of Dermatology recently published a history of its practice, education and research including key milestones, prominent contributions by individuals and textbooks (ATTACHMENT 2) which documents the evolution of the subspecialty to be distinctly different than that of other specialties/subspecialties. The journal Dermatologic Surgery has been published monthly since 1974 with an impact factor of 2.351 which currently ranks 22/62 in dermatology and 72/198 in surgery. This journal published a report documenting the growth of peer reviewed research in this subspecialty from 1994 to 2013 (ATTACHMENT 3). <http://journals.lww.com/dermatologicsurgery/pages/default.aspx>

b. Explain how this proposed new or modified subspecialty addresses a distinct and definable patient population, a definable type of care need or unique care principles solely to meet the needs of that patient population:

The unique value of this subspecialty results from the merger of clinical, dermatologic surgical and dermatopathology skills performed by one specialist in an outpatient setting that is highly effective as well as cost effective. The patient population addressed by this subspecialty consists of patients with skin cancer who would uniquely benefit from surgical removal that spares normal tissue, utilizes specialized tissue processing and histologic techniques that afford the highest chance for cure, and incorporates surgical repairs that maximize functional restoration and minimize deformity (ATTACHMENT 4). Included in this population are patients who have: cancers located near functionally important structures such as the eye, nose, mouth and ears; cancers with a high risk for recurrence based on histologic type, location, size, or immunosuppression; cancers in areas where maximal preservation of normal tissue is most desirable; and cancers that may benefit from multidisciplinary care. Patients benefit not only from improved outcomes with optimal cure rates and tissue sparing, but also from the ability to have the entire process, from removal to repair, occur in one location, typically in one day, with associated cost savings to patients and the system.

Patients with complex conditions, such as organ transplantation, or patients requiring associated sentinel lymph node biopsy or reconstruction by colleagues in related specialties, benefit from the multidisciplinary, team-based management in which those who would be certified in MDS are specifically trained.

c. To provide COCERT with information about the group of physicians concentrating their practice in the proposed new or modified subspecialty area, please indicate the following:

i. The current number of such physicians (along with the source(s) of the data):

The largest professional group of practicing fellowship-trained surgeons are members of the American College of Mohs Surgery (ACMS - <http://www.mohscollege.org/>) which was established in 1967. ACMS reports a professional membership of approximately 1,400 surgeons whose practice is dedicated to the treatment of skin cancer.

Membership in this society requires completion of a one-year ACGME-accredited fellowship after an ACGME-accredited dermatology residency, as well as submission of a case log for review. Fellowship programs started in 1970 and were initially approved by a committee of the ACMS. In 2004 the fellowship accreditation process was transitioned to the ACGME. Currently there are 76 ACGME-accredited programs with 86 slots (ATTACHMENT 5). Since inception, the ACMS reports there have been 1,538 (surgical) fellowship-trained diplomates of ABD. The ACMS annual scientific meeting, which is dedicated to quality care, education and research for the treatment of skin cancer and related conditions, had a registration of 855 physicians in 2017. At that meeting ACMS formally requested the ABD seek certification in this subspecialty (ATTACHMENT 6).

It is difficult to know the exact number of physicians practicing in this field because only 20% of ABD certified dermatologists perform micrographic surgery while almost all treat skin cancer in some way (Source: CMS website: <https://data.medicare.gov/data/physician-compare>). In 2014 CMS reported that 2,205 dermatologists billed CPT code I7311 (stage one micrographic surgery for malignancy on the face) at least 10 times, a number which most closely estimates the number of active practitioners in this field. CMS also reported that 98% of all bills for micrographic surgery were submitted by dermatologists, indicating that the combination of skills required is relatively unique to dermatology.

Some dermatologists who practice in this field have not taken a fellowship. This includes those who trained before fellowships were widely available, were unable to spend an extra year in training or who did not match to a fellowship program. The American Society for Mohs Surgery (ASMS) was established in 1990 to provide post-residency CME education for those who did not take a fellowship. Full membership in ASMS requires completing their CME course and submitting 75 cases for review. ASMS reports on their website a professional membership of approximately 800. Finally, many non-dermatologists also treat skin cancer. However, using CMS claims data, dermatologists perform more skin cancer surgery, especially more micrographic surgery, than any other specialty (ATTACHMENT 7).

ii. The annual rate of increase of such physicians in the past decade (along with the source(s) of the data):

From 2007 to 2017 ACMS membership has increased from 696 to 1333; a total increase of 92%, with an annual average increase of 9%. (ATTACHMENT 8).

iii. The current geographic distribution of this group of physicians, its projected spread in the next five (5) years, and an explanation of how you arrived at this projection:

ACMS data (ATTACHMENT 9) demonstrates that the distribution of fellowship-trained dermatologists is uniform across the USA. As expected, most are located in larger metropolitan areas since it normally requires 4-5 full time clinical dermatologists to generate sufficient referrals for a dermatologist to practice micrographic surgery full time. Based on many studies (see ATTACHMENTS 10 and 11) skin cancer is epidemic, and on the rise, in the USA and many other countries; as such the demand for services provided by fellowship-trained surgeons will likely increase significantly in the foreseeable future.

d. For COCERT, please identify the existing national societies, the principal interest of which is in the proposed new or modified subspecialty area:

American Academy of Dermatology (AAD)
American College of Mohs Surgery (ACMS)
Association of Professors of Dermatology (APD)
American Society of Dermatologic Surgery (ASDS)
American Society of Mohs Surgery (ASMS)

i. Indicate the existing national societies' size and scope, along with the source(s) of the data:

The AAD, founded in 1938, is the largest dermatology organization in the US and the most inclusive in its requirements for membership. Approximately 94% of ABD diplomates are members of AAD.

The ACMS, founded in 1967, has a professional membership of more than 1400 fellowship-trained physicians whose practice is dedicated primarily to the evaluation and surgical treatment of high risk skin cancer. Membership in this society requires completion of a one-year fellowship after dermatology residency. The ACMS established and provided oversight of fellowships in the US in 1970 until accreditation was transitioned to ACGME in 2004. The ACMS is a co-sponsor of the journal Dermatologic Surgery. (Source: <https://www.mohscollege.org/>)

The APD is an organization of academic dermatologists with a mission to promote education in dermatology. APD members include department chairs, residency and fellowship program directors, and other academic dermatologists with a special interest in education. The Dermatologic Surgery Section of APD consists of dermatologic surgery division heads, fellowship directors, and other academic dermatologic surgeons involved in resident and fellow training.

The ASDS, founded in 1970, currently has a membership of approximately 4600, not including trainees. The area of interest of ASDS has overlap with that of ACMS and ASMS but is much broader, notably including those who practice general dermatologic surgery, light and laser-based procedures, and medical and surgical cosmetic dermatology. Fellowship training is not required to be a member. The ASDS is a co-sponsor of the journal Dermatologic Surgery. (Source: <https://www.asds.net/About.aspx>)

The ASMS, established in 1990, currently has a membership of approximately 800 physicians. ASMS fellow and affiliate membership includes ABD and ABOD certified dermatologists, as well as members who are not dermatologists or physicians. ASMS founders envisioned the organization as a provider of professional and educational support for residency-trained dermatologists who practice Mohs surgery. (Source: <http://www.mohssurgery.org/about-asms/>)

ii. Indicate the distribution of academic degrees held by their members, along with the source(s) of the data:

AAD
Fellow (Initial Certification ABD): ~ 10,000
All Membership Categories including international and non-MD: 15,604
(Source: AAD website)

ACMS
MD/DO: ABD certified, ACGME fellowship-trained: over 1400
(Sources: ACMS website; Thomas Stasko, MD, Past-President)

APD
MD/DO: 170
(Source: APD Online Directory)

ASDS
Fellow (ABD- or RCPSC-certified dermatologist): ~4500 Associate (Board eligible): N/A
Trainee: ~1500 (Trainees are enrolled automatically in ASDS)

Osteopathic Affiliate: N/A
(Source: ASDS website)

ASMS
MD/DO: ABD or ABOD certified: 802
Technician: N/A
(Source: ASMS website "Find a Mohs Surgeon" 13Jun2017)

iii. Indicate the relationship of the national societies' membership with the proposed new or modified subspecialty area:

The AAD, representing individuals with a wide variety of practices including administrative, pharmaceutical and international, most of which do not overlap with MDS, has not taken a position on certification in MDS.

The ACMS, whose members are fellowship trained, has formally requested that ABD establish certification in MDS to recognize individuals with advanced training and practice in this area. (ATTACHMENT 6)

The Dermatologic Surgery Section of APD, representing academic dermatologic surgeons, has formally requested that ABD establish certification in MDS. (ATTACHMENT 12).

The ASDS, representing individuals with a wide variety of practices, many of which do not overlap with MDS, has not taken a position on certification in MDS.

The ASMS, whose members are, with some exceptions, not fellowship trained, is opposed to certification in MDS.

e. For the entities described below, please provide the number of those who have a primary educational effort devoted to the proposed new or modified subspecialty area, along with their geographic locations and the source(s) of the data:

i. Medical schools:

See below.

ii. Hospital departments:

See below.

iii. Divisions:

See below.

iv. Other (please specify):

MDS is an outpatient subspecialty. Fellowship programs have an ACGME-accredited sponsoring institution with GME oversight and may be associated with a medical school and/or hospital department or division, but are not always hospital-based. Of the 76 accredited fellowship programs, 57 are associated with medical schools while the remaining programs are associated with hospitals in academic medical centers.

Exposure to MDS curricula typically begins in dermatology residency. All ACGME-accredited dermatology residency programs' curricula must include exposure, either through direct observation or as an assistant, to Mohs micrographic surgery and complex closures, including flaps and grafts; training in the diagnosis and management of skin cancers; and training and experience in dermatopathology. All ACGME-accredited dermatology residency programs must have a surgical director who is fellowship-trained in MDS and offer residents exposure to MDS at a fundamental level.

ACGME-accredited fellowships build upon the fundamentals learned in residency, as illustrated in ACGME Milestones (ATTACHMENT 13). In 2016-2017, there were 76 ACGME-accredited fellowship programs widely distributed across the US (ATTACHMENT 5).

4. Please list the number and names of institutions providing residency and other acceptable educational programs in the proposed new or modified subspecialty area:

76 ACGME-accredited fellowship programs as of December 2017 (ATTACHMENT 14).

a. Indicate the total number of trainee positions available currently (along with the source(s) of the data):

86 fellowship positions
(Source: ACGME)

b. Provide the number of trainees completing the training annually (along with the source(s) of the data):

Year	#Trainees
2013	63
2014	67
2015	73
2016	78
2017	85
2018	86

(Source: San Francisco Match)

c. Describe how the numbers of training programs and trainees are adequate to:

i. Sustain the area of subspecialization:

The number of available positions and number of applicants has been rising each year for several years. (See above tables.) Over 25% of the 2017 dermatology residency graduating class applied for an ACGME-accredited fellowship, and 40% did not match. (Source: San Francisco Match).

	2013	2014	2015	2016	2017
Applicants registered in San Francisco Match	99	101	108	117	137
Applicants participating in match	77	86	95	104	108
Applicants matched	49	53	60	52	58
Taken outside the match	14	14	13	26	27
Total taken inside + outside the match	63	67	73	78	85
Applicants unmatched	28	33	35	52	50

(Source: San Francisco Match)

It is estimated that in 2012 there were 5.4 million basal cell and squamous cell carcinomas diagnosed in the US, and rates have been consistently increasing (ATTACHMENT 10 and <https://www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer/about/key-statistics.html>). Melanoma rates doubled from 1982 to 2011 (MMWR Morb Mortal Wkly Rep 2015; 64:591). Improved overall survival of patients with organ transplantation has resulted in an increased number who develop skin cancers, primarily cutaneous squamous cell carcinomas (SCC). The risk for cutaneous SCC in solid organ transplant recipients is about 65-100 times greater than that of the general population. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4484997/>). Rarer types of skin cancer, often managed by an interdisciplinary team which includes an MDS dermatologist, were responsible for more than 3,500 deaths in a

recent year. (<http://www.cancer.net/cancer-types/skin-cancer-non-melanoma/statistics>)

Thus, there has been an increasing supply of trainee positions, an increasing demand for trainee positions, an increasing number of skin cancers, and an increasing number of complex skin cancers with significant morbidity and mortality requiring this unique expertise.

ii. Allow for a sustained critical mass of trainees necessary for trainee testing validity and training program accreditation:

It is anticipated that there will be 80-100 new graduates per year, based on the current number of trainees and the trend for the number to increase yearly.

5. Please provide the number and type of additional educational programs that may be developed based on this proposed new or modified subspecialty area. Please indicate how you arrived at that number:

For academic year 2018-2019 there are 76 ACGME-accredited fellowship programs compared with 39 in the academic year 2009-2010, an increase of 92% over the 8-year period. The increasing demand for training and number of patients with skin cancers, including complex cancers, suggest that educational program numbers will continue to rise for many more years, although to what degree is yet not known. It is anticipated that both the number of programs and number of positions available per program will increase in the foreseeable future.

6. Please provide responses to (a) through (d) below regarding the duration and curriculum of existing programs:

a. The goals and objectives of the existing programs:

Train fellows in ACGME-accredited programs in the evaluation and management of cutaneous malignancies, with an emphasis on complex and high-risk cancers, micrographic surgical techniques, routine and complex histopathologic evaluation of surgical sections, and repair of the defects resulting from tumor removal. See ACGME Program Requirements for GME (ATTACHMENT 1), Milestones (ATTACHMENT 13), and Comprehensive Objectives for Micrographic Dermatologic Surgery (ATTACHMENT 15).

b. The expected competencies that will distinguish this subspecialist from other subspecialists in the areas of cognitive knowledge, clinical and interpersonal skills, professional attitudes and practical experience:

The competencies are detailed in the ACGME Program Requirements (ATTACHMENT 1). Development of proficiency during training is detailed in the Milestones (ATTACHMENT 13).

c. The scope of practice:

Details are in the ACGME Program Requirements for this program; Section Int. B (ATTACHMENT 1), in the Milestones (ATTACHMENT 13), and in the Comprehensive Objectives (ATTACHMENT 15). Briefly, the scope includes evaluation and management of complex and high-risk cutaneous cancers, micrographic surgical excision of cutaneous cancers, histologic evaluation of surgical sections, and repair of the defects resulting from removal of tumors. Coordination of multidisciplinary care for the optimal management of these patients is also a key competency.

d. The body of knowledge and clinical skills required and whether it is broad enough to require at least 12 months of training:

Please see ATTACHMENT 15, Comprehensive Objectives for Micrographic Surgery and Dermatologic Oncology. The ACGME has already determined that this body of knowledge should be learned over a 12-month span.

7. Please provide a projection and the methodology used for the projection of the annual cost of the required special training:

The cost for training a PGY5 fellow in one of the available 76 ACGME programs already in existence includes the salary, benefits and indirect support costs. Funding sources are typically from institutional clinical revenue with oversight by a GMEC rather than hospital based CMS slots. Indirect costs may be also funded by the established practices of these programs since, among other things, an ACGME-accredited program must demonstrate a practice of at least 1000 total surgical cases per fellow per year.

a. As the sponsoring Member Board, do you have, or access to, the resources to conduct a regular certification and MOC program in this specialty?

Yes, the ABD possesses the infrastructure, resources and experience to conduct regular certification exercises and institute an MOC program for MDS.

b. Do you plan to ask for ACGME accreditation for this new program?

ACGME already accredits these programs.

c. If these programs are not accredited by the ACGME, please document the accrediting body for this program and whether you have the resources to review these programs in a fashion comparable to ACGME.

N/A

8. Please outline the qualifications required of applicants for certification in the proposed new or modified subspecialty area, as it pertains to the following:

a. Possession of an appropriate medical degree or its equivalent:

MD or DO degree is required.

b. General certification by an approved primary specialty Board:

ACGME accredited dermatology training and eligibility for a general dermatology certificate awarded by the ABD will be a prerequisite for certification in MDS.

i. Will diplomates from other ABMS Member Boards be allowed to apply for this subspecialty certificate?

- Yes
- No

If "yes," but only specific ABMS Member Board diplomates would be allowed to apply for this subspecialty certificate, please list those Member Boards:

N/A

If "yes," would you require diplomates to maintain their primary certificate?

- Yes
- No

c. Completion of specified education and training or experience in the subspecialty field:

A practice pathway to certification will exist for 5 years. During this period, any dermatologist certified by the ABD, in good standing and up to date in MOC (if applicable) will be allowed to sit for the examination provided that s/he attests that MDS comprises some portion of practice. After the 5-year window, only ABD-certified dermatologists who have successfully completed ACGME-accredited fellowship program will qualify to take the examination to become certified.

d. Additional qualifications:

N/A

9. Please describe how candidates for certification in the proposed new or modified subspecialty area will be evaluated. In your response, include a description of the method(s) of evaluation (e.g., written, oral, simulation) and the rationale behind the method(s) used in the evaluation process:

A written, psychometrically-valid examination will be administered to candidates for certification. The ABD employs Arbet Consulting to aid in item acquisition and editing, form construction, examination administration and analysis. As is the case for all other ABD examinations, standard setting will be used to inform item analysis and subsequent pass / fail determinations.

10. For (a) through (d) below, please project the need for and the effect of the proposed new or modified subspecialty certification on the existing patterns of subspecialty practice. Please indicate how you arrived at your response.

a. How the Member Board will evaluate the impact of the proposed new or modified subspecialty certificate:

i. On its own primary and subspecialty training and practice:

We do not anticipate any impact of this certificate on existing training patterns. ACGME-accredited fellowship training has already been in place since 2004 and does not appear to have adversely affected the educational experience of general dermatology trainees. Certification in MDS is not anticipated to affect other subspecialty areas within dermatology as the fields of study are sufficiently distinct.

There is concern among some non-fellowship-trained dermatologists who perform micrographic surgery that reimbursement could be restricted to those trained in (and perhaps eventually certified via) formal fellowship programs. We are not aware that such restriction of reimbursement has been experienced to date. Moreover, historically, fellowship training and certification in dermatopathology since 1974 and pediatric dermatology since 2004 have not had a major impact on the ability of the general dermatologist to be reimbursed for dermatopathology or pediatric dermatology services.

ii. On the primary training and practice of other Member Boards:

MDS does not form a part of training in other ACGME-approved programs and therefore, is not anticipated to adversely affect either the educational experience or practice patterns of physicians certified by other member boards. Based on claims data from CMS, 98% of the procedures specific to this field are performed by dermatologists (Source: CMS website: <https://data.medicare.gov/data/physician-compare>). To the contrary, much of the skin cancer practice in MDS requires the cooperation of and consultation with other specialists such as otolaryngology, ophthalmology, plastic surgery, general surgery, clinical dermatology, dermatopathology, medical and radiation oncology. Trainees in these specialties interact on a regular basis with fellows, which results in increased knowledge and experience.

b. The *value* of the proposed new or modified subspecialty certification on practice, both existing and long-term (in health care, *value* is typically defined as *quality* divided by *cost*), specifically:

i. Access to care (please include your rationale):

Access to care has improved with the establishment of this subspecialty and awareness by the public should be improved by certification in MDS. The incidence of skin cancer is growing at a significant rate and uncomplicated skin cancers will continue to be treated by general dermatologists as before. Certification in MDS should strengthen the subspecialty, helping to expand the number of fellowship trained physicians, and improving access to care for those patients requiring treatment of advanced skin cancer by the various techniques covered in current training programs. It is anticipated that cost will remain the same or decrease as more MDS-certified physicians enter practice and quality will improve, leading to added value. For high-risk cancers, micrographic surgery has been reported to be more cost-effective than standard surgical excision, in part due to fewer costly operations for recurrent cancers. (Ravitskiy L, Brodland DG, Zitelli JA: Cost Analysis: Mohs micrographic surgery. *Dermatol Surg* 2012; 38:585-94)

ii. Quality and coordination of care (please include your rationale):

Improved recognition of and access to dermatologists certified in MDS will aid in referral of patients who require more specialized care for advanced skin cancers. Cost aside, quality will improve based upon shorter wait times to access care thus, improving value.

iii. Benefits to the public (please include your rationale):

The public value of this subspecialty results from the merger of clinical, dermatologic surgical and dermatopathology skills performed by one specialist in an outpatient setting that is highly effective and cost effective. The higher cure rate for micrographic surgery also contributes to lower morbidity and cost savings.

c. Please explain the effects of the proposed new or modified subspecialty certification on:

i. Immediate costs and their relationship to the probable benefits (please indicate your methodology):

Cost is anticipated to remain the same or decrease based upon the expanding number of physicians with ACGME training. Any market changes referable to advanced training already exist and certification is not anticipated to affect the value proposition.

ii. Long-term costs and their relationship to the probable benefits (please indicate your methodology):

We do not foresee a trend toward increasing long-term costs or the value equation with the exception that all reliable epidemiologic studies suggest the incidence of skin cancer will increase in the foreseeable future (ATTACHMENT 10 and 11).

d. Please explain the effects if this subspecialty certification is not approved:

MDS is one of the few subspecialties with ACGME-accredited training programs that lacks a corresponding certification by an ABMS member board. To the extent that we believe that ABMS certification, followed by entry in MOC provides for the highest standards and best care for patients, not approving certification in MDS will hinder optimal patient care over time due to the inability of a dermatologist trained in an ACGME-accredited fellowship to demonstrate competence by certification and will diminish the impact of physicians practicing in this area.

11. Please indicate how the proposed new or modified subspecialty will be reassessed periodically (e.g., every five years) to assure that the area of clinical practice remains a viable area of certification:

Aided by the ACGME practice of reassessing program requirements in its accredited fields, the ABD will perform its own needs assessment in parallel, assuring analysis of the continued need for and impact of MDS within the field of dermatology.

12. Please list key external public stakeholders that COCERT may solicit for possible public comment on the proposed new or modified subspecialty area:

American Academy of Dermatology
American College of Mohs Surgeons
American Dermatologic Association
American Society for Dermatologic Surgery
American Society for Mohs Surgery
Association of Professors of Dermatology

NOTE: When submitting this application, please attach the following items:

- Copy of proposed application form for the candidates for certification
- A written statement indicating concurrence or specific grounds for objection from each Primary and Conjoint Board having expressed related interests in certifying in the same field
- Written comments on the proposed new or modified subspecialty area from at least two (2) external public stakeholders

A copy of the proposed certificate for ABMS records

REQUESTED ATTACHMENT A:

Copy of proposed application form for the candidates for certification

Below is a rendering of a proposed application form to be made available to applicants on ABDerm.org.



AMERICAN BOARD OF
DERMATOLOGY

APPLICATION

20XX Micrographic Dermatologic Surgery (MDS) Subspecialty Certification Examination

Name: _____

ABD ID: _____

Email: _____

Click [here](#) to update your ABD profile data.

Click [here](#) to add medical license data.

STATEMENT BY APPLICANT TO QUALIFY FOR THE EXAMINATION

Please attest to your qualifications for the examination:

I completed an ACGME-approved fellowship in Micrographic Surgery and Dermatologic Oncology.

Name of Institution: _____ Date of Completion: _____

I will soon complete an ACGME-approved fellowship in Micrographic Surgery and Dermatologic Oncology.

Name of Institution: _____ Expected Date of Completion: _____

I currently perform Micrographic Surgery in my practice.

STATEMENT BY APPLICANT TO ABIDE BY ABD HONOR CODE

I, the undersigned, understand that this examination and all test questions have been copyrighted by the American Board of Dermatology, Inc.(ABD) and are the exclusive property of the ABD. I will not, without the written consent of the ABD, retain, copy, reproduce, disclose, discuss, share, reveal, or distribute any questions or any other part of this examination, including memorized, reconstructed, and partially or fully recalled items. Likewise, I will not circulate any proposed or otherwise suggested answers to these questions for exam preparation or any other purpose without the written consent of ABD. I will also not disrupt, or threaten to disrupt, any ABD examination in any way.

I attest that all statements that I make to the ABD concerning my training, licensure, eligibility to take the examination, and other relevant facts have been truthful and non-misleading. I further attest that I will notify ABD in writing (a) if I become the subject of any disciplinary action by a State Board of Medicine, (b) if I am charged with criminal conduct, (c) if I am barred or suspended from participation in any federal health care program, or (d) if any other development occurs which might reasonably call into question my entitlement to Board certification.

I agree to disqualification from examination, to denial of issuance of a document of Certification to me, and to forfeiture and redelivery of any document of Certification granted me by the ABD in the event (a) that any of the statements made by me are false, misleading, or materially incomplete, (b) that I fail to cooperate with the ABD in any investigation, or (c) that I violate any of the rules and policies of the ABD.

I understand that if, after investigation, ABD has good reason to believe that I have engaged in cheating or irregular behavior in connection with the examination, whether or not such behavior had an effect on my performance, ABD may invalidate my examination, revoke my certification, and bar me from retaking the examination in the future. I also understand that ABD may require me to retake one or more portions of the examination if the ABD is presented with evidence that the security of the examination has been compromised, notwithstanding the absence of any evidence of my personal involvement in such activities.

I will report to ABD or to the proctor at the examination any incident that I suspect may involve cheating or an attempt to cheat on the examination.

For exams for which study guides are provided: I understand that study guides, including test questions and digital images, provided by ABD for exam preparation are copyrighted by the ABD and are the exclusive property of the ABD. The ABD grants exam candidates permission to download the study guides for their personal use for study and exam preparation only. Questions in the study guides may be discussed with other exam candidates. I understand that any other use, reproduction, or distribution of the study guides is prohibited without the written consent of the ABD. I will maintain downloaded study guides in a secure manner to prevent unauthorized access or distribution. I understand that giving unauthorized access to, or distribution of, study guides to others as a result of my negligence or my deliberate action may constitute copyright infringement.

I hereby hold the ABD, its members, examiners, officers, and agents free from any complaint, claim, or damage arising out of any action or omission by any of them in connection with my application, any examination given by the Board, any grade relating thereto, the failure to issue me any Certificate, or any demand for forfeiture or redelivery of such Certificate. I understand that the decision as to whether I am eligible to sit for an examination or qualify for a certificate is within the sole discretion of the ABD. I further agree that any suit that I may bring against the ABD or its members, examiners, officers, or agents will be brought in a court located in Cook County, Illinois, and I hereby agree to service of process upon me out of a court in Cook County.

For exams taken during training or for initial certification: I understand that my training director may receive selected results of the examination and/or other information relating to the examination. I hereby authorize the release of my results and other information.

I understand that on the day of the examination, I may be required to reaffirm that I agree to the above statements and conditions, and that if I do not, I will not be allowed to proceed to the examination.

I HAVE READ THIS HONOR CODE, ACKNOWLEDGE THAT I HAVE HAD THE OPPORTUNITY TO ASK QUESTIONS ABOUT IT, AND AGREE TO BE LEGALLY BOUND BY IT.

By clicking SUBMIT, I hereby certify that the information stated above is accurate, and that I have read and agree to the honor code.

SUBMIT

REQUESTED ATTACHMENT B:

A written statement indicating concurrence or specific grounds for objection from each Primary and Conjoint Board having expressed related interests in certifying in the same field.

Currently there are not any other Boards with related interests in certifying in Micrographic Dermatologic Surgery.

REQUESTED ATTACHMENT C:

Written comments on the proposed new or modified subspecialty area from at least two (2) external public stakeholders.

C: Item # 1: Letter of request from the American College of Mohs Surgery



American College
of Mohs Surgery

*Fellowship trained skin cancer
and reconstructive surgeons*

Officers:

President

Thomas Stasko, MD, FACMS

Vice President

Allison T. Vidimos, RPh, MD,
FACMS

Secretary/Treasurer

Barry Leshin, MD, FACMS

Immediate Past President

John G. Albertini, MD, FACMS

Board of Directors:

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Chrysalyn D. Schmults, MD,
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Summer R. Youken, MD, FACMS

David M. Zloty, MD, FRCP, FACMS

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Executive Office:

American College of Mohs Surgery

555 East Wells Street, Suite 1100

Milwaukee, WI 53202

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E-mail: info@mohscollege.org

Website: www.mohscollege.org

www.skincancer.mohssurgery.org

April 28, 2017

Stanley J. Miller, MD

President, American Board of Dermatology

2 Wells Avenue

Newton, Massachusetts 02459

Dear Dr. Miller,

As the President of the American College of Mohs Surgery and the Chair of the Executive Committee of the Board of Directors I represent over 1,400 fellowship-trained Mohs surgeons. Mohs Surgery and Dermatologic Oncology has evolved over the past decades into a mature subspecialty of Dermatology with widespread ACGME accredited fellowships and a well-established, defined curriculum representative of a progressively expanding body of knowledge.

On behalf of the American College of Mohs Surgery, I respectfully request that the American Board of Dermatology explore the development and establishment of certification in Mohs Surgery and Dermatologic Oncology to recognize individuals with advanced training and practice in this area. This action would be consistent with the certification offered by the American Board of Dermatology for Dermatopathology and Pediatric Dermatology.

I would be pleased to discuss the matter in greater detail, if desired.

Sincerely,

A handwritten signature in black ink, appearing to read 'T Stasko'.

Thomas Stasko, MD

Cc: Thomas D. Horn, MD, MBA

C: Item # 2: Letter from the Association of Professors of Dermatology



ASSOCIATION OF PROFESSORS OF DERMATOLOGY

6134 Poplar Bluff Circle | Norcross, GA 30092
770-613-0932 office | 305-422-3327 fax | www.dermatologyprofessors.org

January 17, 2018

Daniel B. Eisen, MD,
Professor of Clinical Dermatology
Department of Dermatology
University of California Davis Medical Center
3301 C St, #1400
Sacramento, CA 95816
Phone:(916) 997-6346
Fax:(916) 734-6795
Email: dbeisen@ucdavis.edu

Janet A. Fairley, MD
President, American Board of Dermatology
2 Wells Avenue
Newton, Massachusetts 02459

Dear Dr. Fairley,

The Dermatologic Surgery Section of the Association of Professors of Dermatology represents the academic dermatologists involved in the education of dermatology residents and fellows in all aspects of surgical dermatology and the treatment of cutaneous malignancies. As such we have observed and participated in the evolution of Mohs Surgery and Dermatologic Oncology into a mature sub discipline of Dermatology with widespread ACGME accredited fellowships and a well-established, strongly defined curriculum representative of a progressively expanding body of knowledge.

On behalf of the Dermatologic Surgery Section of the Association of Professors of Dermatology, we respectfully request that the American Board of Dermatology continue with the development and establishment of certification in Mohs Surgery and Dermatologic Oncology to recognize individuals with advanced training and practice in this area. Just as with residency programs, a Board exam is an opportunity for those who have undergone specialty training to demonstrate competence in their field of study. This action would be consistent with the certification offered by the American Board of Dermatology for Dermatopathology and Pediatric Dermatology. Recognizing additional advanced training in Mohs Surgery and Dermatologic Oncology will serve the public by clarifying the role of all dermatologists in the diagnosis and treatment of cutaneous malignancies and leading patients to the best, most cost-effective treatment and serve Dermatology by formalizing the specialty's expertise and leadership in the field.

We would be pleased to discuss the matter in greater detail, if desired.

Best regards,

Daniel B. Eisen, MD
Chair, Dermatologic Surgery Section of the Association of Professors of Dermatology

EXHIBIT 2-ATTACHMENTS
(PARTIALLY REDACTED)

REQUESTED ATTACHMENT D:

A copy of the proposed certificate for ABMS records.

**The American Board
of
Dermatology**

INCORPORATED IN 1932

ATTESTS THAT

Jane A. Sample, MD

HAS MET ALL THE SPECIFIC STANDARDS AND QUALIFICATIONS OF THE
CERTIFICATION PROCESS, HAS PASSED THE EXAMINATION
AND IS HEREBY CERTIFIED IN THE SUBSPECIALTY OF

MICROGRAPHIC DERMATOLOGIC SURGERY

THIS CERTIFICATION WILL REMAIN IN EFFECT FOR TEN YEARS, COMMENCING ON JANUARY 1, 20XX
AND IS VALID THROUGH DECEMBER 31, 20XX CONTINGENT UPON PARTICIPATION IN
AND COMPLETION OF MAINTENANCE OF CERTIFICATION (MOC).



ABD ID: 001234

PRES DENT

EXECUTIVE DIRECTOR

VICE PRES DENT

ASSOCIATE EXECUTIVE DIRECTOR

ASSISTANT EXECUTIVE DIRECTOR





**Accreditation Council for
Graduate Medical Education**

**ACGME Program Requirements for
Graduate Medical Education
in Micrographic Surgery and Dermatologic Oncology**

ACGME approved major revision: September 28, 2014; effective: July 1, 2015
Revised Common Program Requirements effective: July 1, 2015
Revised Common Program Requirements effective: July 1, 2016
Revised Common Program Requirements effective: July 1, 2017



**American College
of Mohs Surgery**

*Fellowship trained skin cancer
and reconstructive surgeons*

Officers:

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Thomas Stasko, MD, FACMS

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Cc: Thomas D. Horn, MD, MBA



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January 17, 2018

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Daniel B. Eisen, MD
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The Micrographic Surgery and Dermatologic Oncology Milestone Project

A Joint Initiative of

The Accreditation Council for Graduate Medical Education

and

The American Board of Dermatology



July 2015

The Micrographic Surgery and Dermatologic Oncology Milestone Project

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competency in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

Micrographic Surgery and Dermatologic Oncology Milestones

Chair: John A. Zitelli, MD

Working Group

Christopher J. Arpey, MD

David G. Brodland, MD

Laura Edgar, EdD, CAE

Allison T. Vidimos

Advisory Group

Thomas D. Horn, MD

Mary Lieh-Lai, MD

Nicole M. Owens, MD

Milestone Reporting

This document presents Milestones designed for programs to use in semi-annual review of fellow performance and reporting to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies organized in a developmental framework from less to more advanced. They are descriptors and targets for fellow performance as a fellow moves from entry into fellowship through graduation. In the initial years of implementation, the Review Committee will examine Milestone performance data for each program's fellows as one element in the Next Accreditation System (NAS) to determine whether fellows overall are progressing.

For each period, review and reporting will involve selecting milestone levels that best describe each fellow's current performance and attributes. Milestones are arranged into numbered levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert in the subspecialty. These levels do not correspond with post-graduate year of education.

Selection of a level implies that the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

Level 1: The fellow demonstrates milestones expected of an incoming fellow.

Level 2: The fellow is advancing and demonstrates additional milestones, but is not yet performing at a mid-fellowship level.

Level 3: The fellow continues to advance and demonstrate additional milestones, consistently including the majority of milestones targeted for fellowship.

Level 4: The fellow has advanced so that he or she now substantially demonstrates the milestones targeted for fellowship. This level is designed as the graduation target.

Level 5: The fellow has advanced beyond performance targets set for fellowship and is demonstrating "aspirational" goals which might describe the performance of someone who has been in practice for several years. It is expected that only a few exceptional fellows will reach this level.

Additional Notes

Level 4 is designed as the graduation *target* and *does not* represent a graduation *requirement*. Making decisions about readiness for graduation is the purview of the fellowship program director. Study of Milestone performance data will be required before the ACGME and its partners will be able to determine whether milestones in the first four levels appropriately represent the developmental framework, and whether Milestone data are of sufficient quality to be used for high-stakes decisions.

Examples are provided with some milestones. Please note that the examples are not the required element or outcome; they are provided as a way to share the intent of the element.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to the ACGME supervision guidelines, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

Answers to Frequently Asked Questions about the Next Accreditation System and Milestones are posted on the Next Accreditation System section of the ACGME website.

COMPREHENSIVE OBJECTIVES FOR MICROGRAPHIC DERMATOLOGIC SURGERY

This outline describes a curriculum of objectives for micrographic dermatologic surgery (MDS). It is a working draft that will be periodically updated and revised. Please note that any omissions or inaccuracies are unintended.

(Prepared by Stanley J. Miller, MD, as part of an initiative by the American Board of Dermatology to produce detailed content outlines for dermatology and dermatologic subspecialties. Original draft reviewed by a group of 16 dermatologic surgeons. Edited by Lela A. Lee, MD, for the ABD.)

PAGE	SECTION	TITLE
2-3	1	GENERAL OBJECTIVES IN DERMATOLOGIC PRACTICE
4-8	2	BASIC SURGICAL PROCEDURES AND PRINCIPLES
9-13	3	MOHS MICROGRAPHIC SURGERY, RECONSTRUCTION & SPECIAL PROCEDURES
14-15	4	BASIC SCIENCE RELATED TO MDS
16-18	5	MEDICATIONS AND OTHER NON-SURGICAL TREATMENTS
19	6	ETHICS AND COMMUNICATION
20-21	7	QUALITY, SAFETY, & SYSTEMS-BASED PRACTICE
22-25	8	SPECIFIC CONDITIONS RELATED TO MDS

SECTION #1: GENERAL OBJECTIVES IN DERMATOLOGIC PRACTICE WITH SPECIAL RELEVANCE TO MSDO

Take a directed history and assess the physical findings to generate an appropriate working diagnosis and/or differential diagnosis.

- Recognize common and uncommon presentations of benign and malignant skin conditions.
- Distinguish characteristic patterns of benign versus malignant lesions using epiluminescence microscopy (dermoscopy).

Select appropriate laboratory tests and imaging studies when indicated.

- Know when skin biopsy is and is not appropriate.
- Know when to order imaging studies prior to biopsy or surgical treatment of lesions on the head, neck, and spinal area.
- Understand indications, strengths, limitations, and relative costs of plain films, ultrasound, CT scan, MRI, and PET-CT scan.
- Understand indications, strengths, limitations, risks, and relative cost of sentinel lymph node biopsy.
- Know when special stains and immunostains are useful, which ones to order, and their strengths and limitations for diagnosis of cutaneous lesions, including Merkel cell carcinoma, dermatofibrosarcoma protuberans, sebaceous carcinoma, apocrine carcinoma, extramammary Paget disease, microcystic adenocarcinoma, desmoplastic trichoepithelioma, atypical fibroxanthoma, surgical margins of lentigo maligna, cutaneous B and T cell lymphomas, and spindle cell neoplasm of unknown origin.
- Know when molecular testing is useful, which tests to order, and their strengths and limitations for diagnosis of cutaneous conditions, for example, melanoma (e.g., BRAF (V600E) mutation and c-kit mutation), cutaneous B and T cell lymphomas, familial atypical multiple mole and melanoma syndrome, xeroderma pigmentosum, Muir-Torre syndrome, dystrophic epidermolysis bullosa, and albinism.

Interpret skin biopsy findings in the context of the clinical findings.

- Recognize when a pathology report is discordant with the clinical findings, and know what steps to take.

Know when surgical treatment is and is not indicated.

- Recognize clinical settings in which no treatment or observation of skin cancer is a reasonable option, including patients at the end of life, inoperable advanced disease, uncertain diagnosis/unclear prognosis, and the correct operative site can not be identified.

Determine urgency of treatment and triage appropriately.

Recognize when referral is indicated.

Develop management plan in the context of the patient and the health care system.

- Know strengths, weaknesses, and relative costs of treatment alternatives.
- Know how to assess non-medical issues (logistical, cultural, caregiver, financial, family and patient concerns) that will affect medical care; solicit patient and family input about them; and integrate it all into a care plan.

Determine need and interval for follow-up care.

Monitor therapy properly.

Modify management plan, depending upon results.

Reassess diagnosis when necessary.

SECTION #2: BASIC SURGICAL PROCEDURES AND PRINCIPLES

Maintain the proper surgical environment.

- Understand the steps involved in, uses of, and strengths and weaknesses of disinfection and sterilization techniques for surfaces and equipment.
- Describe the strengths and weaknesses of moveable surgical lights versus fixed ceiling lights versus headlamps.
- Know the importance of ergonomic issues in surgery, including standing, sitting, and proper table height.
- Monitor and maintain high function in the operative suite of all devices, including electrical devices, sterilization techniques and equipment, and emergency devices.
- Monitor and maintain high function of all protocols, including emergency plans, bloodborne pathogen exposure protocols, and outcomes such as infection or complication rates.
- Follow universal precautions and use additional precautions when indicated.
- Understand the equipment and supplies necessary to provide emergent care in the office, how to keep them up-to-date and how to ensure that all physicians and staff members are regularly re-trained in their use.
- Know how to access the emergency medical system, obtain rapid vital signs, administer epinephrine emergently, perform BLS functions, use a defibrillator, provide oxygen and insert an intravenous catheter.
- Understand AAD guidelines of care for office-based surgery.

Evaluate the patient pre-operatively.

- Identify the location of the lesion requiring surgical removal by means such as physical examination, photographic documentation, diagrams, and triangulation measurements.
- Palpate tumors accurately to identify size, depth, and possible extension to underlying structures.
- Identify and properly palpate regional lymph node basins.
- Know when the pathology report is discordant with the clinical findings.
- Identify patients who are at increased risk for poor wound healing and instruct about how to minimize the risk, e.g., smoking cessation.
- Identify and respond to medical issues that may have an impact on cutaneous surgery, including anticoagulant treatment; implanted electrical devices; implanted artificial materials such as heart valves and artificial joints; cochlear implants; stated allergies to anesthetics, surgical preps, or wound dressing materials; pregnancy and lactation; smoking; anxiety; immunosuppression; diabetes mellitus; obesity; vascular disease; and lymphedema.
- Know how to assess peripheral arterial and venous disease, including clinical assessment, ankle-brachial index, transcutaneous oxygen measurement, toe brachial index, and pulse volume recordings with waveform analysis.

- Know the clinical settings in which pre-, peri-, or post-operative antibiotics are indicated.
- Know when multidisciplinary evaluation is required.
- Understand the important components of pre-, peri-, and post-operative education of patients.

Use proper surgical preps.

- Know how to prepare all body sites for skin surgical procedures.
- Understand the advantages and disadvantages of different surgical preps, including chlorohexidine gluconate, povidone-iodine, and isopropanol.

Select optimal anesthesia.

- Know the different members of the amide and ester classes of anesthetics, including their average time to onset, duration, effect of epinephrine, toxicities (including pregnancy-related and effects of hepatic and cardiovascular disease) and relative doses at which they occur.
- Know which local anesthetic is most appropriate in different clinical situations.
- Recognize and manage anesthesia toxicities.
- Minimize patient discomfort when injecting anesthetic by means such as use of small-gauge needles, buffering, heating, slow infiltration, entrance through areas of more distensible tissue first and/or proximally along sensory nerves, and ring blocks.
- Minimize the total dose of local anesthesia required when this is necessary, including using ring blocks and intradermal injection; and minimize total epinephrine dose when necessary, including dilution of the epinephrine to 1:200,000-1:800,000.
- Respond effectively to patients who are relatively resistant to local anesthesia and require additional injections.
- Know when longer-acting agents such as ropivacaine and carbocaine are useful.
- Know clinical settings in which epinephrine should be avoided.
- Recognize clinical settings in which topical anesthetics may be useful, and know their strengths, limitations, method of use, and how to monitor for and treat side effects.
- Know how to prepare and administer tumescent anesthesia, including knowing the concentration of lidocaine and epinephrine represented and the upper limit of the dose and volume that will minimize the possibility of toxicity.
- Identify anatomic landmarks for nerve blockade and safely administer nerve blocks in the supraorbital/supratrochlear, infraorbital, and mental regions.
- Employ effective nerve blockade techniques for nail surgery, including digital block, wing block, and transthecal block.
- Know how to dose, monitor, and manage side effects and toxicities of oral benzodiazepines and opioids used for conscious sedation.

Demonstrate competence in skin biopsy and excisions.

- Understand how to perform shave, punch, snip, saucerization, incisional, and excisional biopsies, and when each is most appropriate.
- Articulate the risks associated with skin biopsy, shave removal, and excisional surgery.
- Know the essential components of the pre-operative procedural pause (time out).
- Know what surgical margins are necessary for excision of various entities, including basal cell carcinoma, squamous cell carcinoma, atypical nevi, melanoma-in-situ, and invasive melanoma.
- Plan an appropriate width, length, depth, and orientation of excision for each suspected diagnosis and site.
- Understand the role of scouting biopsies to assess peripheral tumor extent, and in which clinical situations the procedure is useful.
- Understand proper closure technique, including when and how to undermine, suturing techniques to minimize wound tension and maximize wound strength, and how to create good eversion and apposition of wound edges.
- Know how to manage perioperative bleeding.
- Identify sites at higher risk for injury to nerves, vessels, or other underlying structures.
- Identify anatomic sites susceptible to force margin distortion.

Demonstrate competence in the use of surgical instruments.

- Hold and use surgical instruments properly.
- Identify instruments commonly used in excisional surgery and choose appropriate instruments for different applications.
- Understand the proper use of a skin hook.
- Choose surgical instruments with the proper balance of delicacy versus sturdiness for different body sites.
- Choose and properly use instruments for nail surgery.
- Know how to use less commonly employed instruments, including chalazion clamp, eye shield, doppler for artery localization, and ocular probe to identify lacrimal canaliculi.

Demonstrate competence in the use of closure materials.

- Choose sutures or staples with the proper balance of delicacy versus sturdiness for different body sites.
- Know the names of available sutures and their qualities, including size, absorbable versus non-absorbable, monofilament versus braided, strength, time to absorption, memory, elasticity, plasticity, and relative cost.
- Know the characteristics of available needles, including size, needle anatomy, curvature, and cutting versus reverse-cutting.
- Know indications for staples, how to apply and remove them, and how to manage complications.

- Know how to use buried vertical mattress suturing to create wound edge eversion.
- Know how to create wound edge apposition using surface suturing techniques, including simple interrupted, running, running locked, running subcuticular, and horizontal mattress sutures.
- Know how to perform a deep pulley stitch when high tension is present.
- Know how to use pleated stitching techniques when two sides of tissue of uneven lengths are sewn together, as in A-T flap.
- Use deep/periosteal tacking and fascial plication sutures to decrease tension and prevent movement of adjacent free margins.
- Employ figure 8 stitch to tie off arterial bleeding.
- Use Frost suture to prevent ectropion.
- Recognize and manage adverse effects of suture materials, including tissue strangulation, suture reactions, and granuloma formation.
- Choose proper tissue adhesives and provide appropriate aftercare when tissue adhesives are used.

Promote effective wound healing.

- Instruct the patient in proper post-operative wound care.
- Identify and respond to factors that impact wound healing, including body site, circulatory problems, lymphedema, smoking, immunosuppression, diabetes mellitus, and a history of poor compliance with therapy.
- Know the components of surgical dressing and how to apply to them all body locations.
- Know how to apply specialized wound dressings such as pressure head wrap, eye dressing, nasal stent, and use of an avulsed nail plate in a nail bed.
- Provide wound care instructions in specialized situations, including initial elevation of distal extremity sites, use of elastic wraps for extremities to avoid the side effects of prolonged adhesive use, how to monitor for decreased perfusion in digits, use of bobby pins in hair bearing areas, sitz baths and proper direction of wiping in perianal and genital regions, importance of ointment use with exposed cartilage or bone.
- Understand how to apply pressure dressings that extend pressure to all aspects of the surgical wound, and know how to apply bolster dressing for skin grafts.
- Know when specialized dressings or wound healing techniques may be of value, including biologic, absorptive and antimicrobial dressings; pressure stockings; Unna boots; and hyperbaric oxygen.
- Know how to place, manage, and remove surgical drains to prevent hematoma formation.

Demonstrate competence in electrosurgical techniques.

- Know the definitions of electrosurgery, electrocautery, electrocoagulation, electrofulguration, electrodesiccation, electrosection, monopolar, bipolar, monoterminial, and biterminal.

- Know how to perform curettage and electrodesiccation, and details that produce higher cure rates (e.g., curetting in multiple directions).
- Know how to manage patients with implanted electrical devices.
- Avoid oxygen and flammable agents when electrosurgery is being performed.
- Know alternative methods of hemostasis, including direct vessel ligation, thrombin, gel foam, and direct pressure.

Demonstrate competence in cryotherapy.

- Know how to perform basic cryotherapy techniques, including spray and cotton-tipped applicator treatments.
- Know freeze and thaw times to destroy pre-malignant and malignant lesions.
- Understand the use of insulated peripheral barriers.
- Know how to place skin thermocouples to monitor temperature changes at desired depth.
- Instruct the patient in proper post-procedure care and possible side effects of therapy.

Demonstrate competence in incision and drainage.

- Know how and when to perform incision and drainage of abscesses and hematomas.
- Know how to pack wounds.
- Instruct the patient in proper post-procedure care.

Manage surgical complications.

- Identify and manage wound healing problems and complications, including suspected cellulitis, erosive pustular dermatosis, allergic or irritant contact dermatitis, tissue necrosis, dehiscence, motor nerve injury, incomplete skin graft take, granulation tissue formation, suture reactions, hypertrophic scars, keloids, prolonged healing, and chronic eyelid lymphedema.
- Know the likely outcome of common complications.
- Know when debridement is and is not necessary.
- Know when referral to other specialists or centers should be considered.
- Know what to do when the patient is unhappy with the cosmetic result, including additional communication; accelerated follow-up; consideration of further waiting; massage; use of over-the-counter products, topical bleaching products, steroids or retinoids; intralesional triamcinolone injections; surgical revision, dermabrasion, or laser; and referral to surgical colleagues.

SECTION #3: MOHS MICROGRAPHIC SURGERY, RECONSTRUCTION, AND SPECIAL PROCEDURES

Understand the basics of Mohs micrographic surgery.

- Describe the difference in specimen processing between Mohs micrographic surgery and routine breadloaf pathology.
- Articulate the advantages and disadvantages of Mohs micrographic surgery.
- Articulate Appropriate Use Criteria for Mohs Surgery.

Demonstrate competence in obtaining and processing MMS specimens.

- Obtain typical MMS specimens with beveled edges and proper marking.
- Conserve tissue while obtaining appropriate specimens for full examination, including obtaining thin first layers, narrow peripheral additional layers, and shallow deep additional layers.
- Know how to obtain MMS specimens in more difficult settings, including tumor involvement of cartilage, periosteum, and nail bed, and extension into the ear canal, orbit, or conjunctiva.
- Recognize rare settings in which MMS may need to be terminated without obtaining clear margins, including deep extension into the ear canal, orbit, sinuses or bone; inability to maintain adequate local anesthesia; concerns about excessive bleeding or patient safety; and extensive disease spanning multiple anatomic subunits.
- Understand how to section MMS specimens using a cryostat.
- Understand how to stain and immunostain MMS specimens.
- Understand how to use and care for MMS laboratory equipment, including cryostat, stainer, and microscope.
- Understand and comply with requirements of regulatory authorities for MMS laboratory and MMS.

Interpret findings on MMS slides.

- Interpret typical MMS slides, recognizing adequacy of skin edge and margin, common skin cancer growth patterns, and positive versus negative specimens.
- Recognize technical problems that impact slide quality, including epidermal "chatter" from a dull blade, fat or cartilage "drop out" when tissue block is not cold enough, thick cuts providing poor resolution, and poor staining quality indicating need to check quality of solutions.
- Recognize tumor simulators, including incidental nevi, syringomas, seborrheic keratoses, folliculocentric basaloid proliferation, normal stasis changes in lower extremity locations, granulomas, eccrine metaplasia, parotid tissue, salivary glands, and lacrimal canniculi.
- Recognize subtle residual tumor presence, including superficial basal cell carcinoma or squamous cell carcinoma-in-situ, still-positive areas of highly

infiltrative tumors that filter out into single cell extensions, perineural extension, and dense inflammation possibly masking tumor.

- Recognize and know the importance of actively looking for unexpected rare tumor presence, including desmoplastic melanoma that can underlie melanoma-in-situ, the fibrosarcoma variant of dermatofibrosarcoma protuberans, and unanticipated perineural involvement by tumor.
- Identify situations in which recuts or special stains may be required, including a complete specimen (periphery and depth) has not been obtained; staining is inadequate; identification of cell type is difficult; inflammation is dense; initial biopsy diagnosis is suspect; discontinuous tumor growth is suspected; and perineural or intravascular tumor presence needs to be confirmed.
- Know diagnoses for which special stains may be useful, including melanoma-in-situ, extramammary Paget disease, sebaceous carcinoma, and dermatofibrosarcoma protuberans.

Select second intention healing for closure of the defect when appropriate.

- Understand general principles of healing by second intention, including which body sites and type of defect heal well by second intention (concave > flat > convex; smaller > larger diameter; shallow > deep).
- Identify additional sites where second intention healing is often used, including non-hair bearing scalp, lip defects inside vermilion border, dorsal hands and fingers, and shins.
- Educate the patient about what to expect, including likely length of healing time, wound care details, and anticipated cosmetic outcome.
- Manage complications, including ectropion, webbing, contracture, impaired nasal airflow, hypopigmentation, depressed scarring, and dissatisfaction with cosmetic result.

Demonstrate competence in intermediate and complex closures.

- Understand principles of closure along relaxed skin tension lines (RSTL), including the following: alignment of closure parallel to RSTL to maximize cosmetic result; typical axis of RSTL at different body sites; sites where RSTL run obliquely (mid-cheek, arms, and legs); sites where RSTL may vary from person to person (e.g., junction where pre-auricular cheek and lateral canthus meet); identification of RSTL by palpating of the area with the patient in the relaxed, neutral position (e.g., sitting or standing and looking straight ahead, not lying on stomach); and proper orientation to avoid distortion of free margins.
- Understand the value of S-plasty on curved surfaces such as cheek, arms and legs and the value of M-plasty in shortening the final closure length.
- Design and execute named complex closures, including S-plasty and M-plasty.
- Understand techniques that maximize cosmesis, including the following: drawing a 3:1 tangent-to-circle closure along relaxed skin tension lines; making all incisions 90 degrees to the skin surface to prevent beveling; using

the correct plane to undermine in at different body sites (e.g., with larger closures, in the subgaleal plane on the scalp, just above cartilage on the nose and ear, and just above fascia on the arms and legs); undermining adequately in all directions; and sewing with eversion, leaving a small portion of the most dependent side of the closure without surface sutures to allow egress of blood, if needed to prevent hematoma formation.

- Know the importance of pre-operative palpation of surgical sites on the legs with the patient weight-bearing, to ensure there is adequate laxity for closure.

Understand general principles of reconstruction using flaps.

- Identify advancement v. rotation v. transposition flaps.
- Understand the differences between advancement, rotation, and transposition in terms of force vectors: Advancement flaps have force vectors similar to those of a fusiform ellipse but alter where the dog ears are removed. Rotation flaps incompletely change that force vector direction approximately 90 degrees. Transposition flaps tend to share closure force vectors in multiple different directions.
- Know the location of tissue reservoirs in various anatomic areas of the face and how this impacts selection of a flap for reconstruction.
- Know the appropriate planes for undermining in various anatomic locations.

Demonstrate competence in advancement flaps.

- Design and execute named advancement flaps, including unilateral advancement, bilateral advancement, A-T/A-L (and variants), O-Z (and variants), and crescentic advancement.
- Know locations where advancement flaps may be useful, including suprabrow to prevent raising of the eyebrow, infraorbital to prevent ectropion, and upper lip to prevent eclabium.
- Understand how to use pleated stitching techniques when two sides of tissue of uneven lengths are sewn together, as in an A-T flap.

Demonstrate competence in rotation flaps.

- Design and execute named rotation flaps, including cheek rotation, lip rotation, dorsal nasal (glabellar) flap, Mustarde-style under eye, and spiral/shark flap in alar crease.
- Understand that rotation flaps often require a 4:1 or 5:1 ratio of flap length to defect diameter.
- Understand the importance of a back-cut in allowing a rotation flap to truly rotate and not just advance.

Demonstrate competence in transposition flaps.

- Design and execute named transposition flaps: including rhomboid, nasolabial, bi-lobed (and variants), and Spear.
- Prevent and treat trap-door defects, including techniques of extensive undermining, massage, intralesional triamcinolone, and surgical revision.

Demonstrate competence in pedicle flaps.

- Design and execute island pedicle advancement flaps: including central-based pedicles, laterally-based pedicles, and Keystone flap.
- Understand that pedicle advancement flaps with central pedicles must be based in regions with enough underlying subcutaneous fat and/or muscular base to allow adequate flap movement.

Demonstrate competence in interpolation flaps.

- Design and execute paramedian forehead and cheek interpolation flaps, including understanding the following: how to identify the supratrochlear artery using doppler techniques; techniques of pedicle dressing; typical time period before take-down; techniques to confirm existence of a new blood supply before take-down; how to thin the flap and perform revisions in additional procedures; simultaneous use of cartilage grafts; and techniques to repair mucosal defects in conjunction with interpolation flaps (e.g., fold-over flap, mucosal full-thickness skin graft).
- Know how to perform a scalp jump flap.

Understand general principles of reconstruction using skin grafts.

- Select appropriate candidate for skin grafting, including appropriate patient and appropriate surgical defect.
- Identify factors that impact graft survival, including body site, poor circulation, lymphedema, smoking, and diabetes mellitus.
- Know when to use full-thickness, split-thickness, and composite skin grafts, and the strengths and limitations of each.
- Educate the patient about appropriate postoperative wound care and expected healing times.
- Manage complications, including necrosis, prolonged healing, and hypopigmentation.

Demonstrate competence in full-thickness skin grafting.

- Understand the strengths and weaknesses of various full-thickness skin graft donor sites, including preauricular, postauricular, clavicular, conchal bowl, nasolabial fold, forehead, flexor forearm, and inner upper arm.
- Design and execute a full-thickness skin graft, including knowing how to correctly size, thin if needed, suture with a ship-to-shore technique, place basting stitches, and use a bolster.

Demonstrate competence in split-thickness skin grafting.

- Design and execute a split-thickness skin graft, including knowing how to correctly size; set the dermatome to proper thickness (0.015") or design template for hand harvesting; lubricate and harvest at donor site; fenestrate if necessary; suture or staple into place; and properly dress the donor and recipient sites.

Demonstrate competence in composite skin grafting.

- Design and execute a composite graft, including knowing how to identify an appropriate auricular donor site, harvest and suture it into place, and provide immobilization for healing using nasal stents, bolsters or other means.

Demonstrate competence in tissue expansion techniques.

- Know strengths and limitations of various tissue expansion techniques.
- Understand principles of delayed tissue expanders and their strengths and limitations.

Demonstrate competence in scar revision.

- Know when intralesional corticosteroid should be used prior to or in lieu of surgical revision.
- Know when resurfacing is appropriate for scar revision.
- Know when specific surgical scar revision techniques are appropriate, and their strengths and limitations.
- Design and execute named scar revision techniques, including Z-plasty, V-Y-plasty, W-plasty, geometric broken line closure, re-creation of sulci, removal of inversions, and improvement of trap-dooring.

Demonstrate competence in nail surgery.

- Know nail anatomy, including location of matrix and extensor tendon.
- Know blockade techniques for nail surgery, including digital block, wing block, and transthecal block.
- Recognize when longer acting agents such as ropivacaine and carbocaine are useful.
- Know clinical settings in which epinephrine should be avoided.
- Know how to avulse a nail plate or a portion of one, including trap door, partial, and proximal techniques for avulsion.
- Understand nail biopsy techniques, including the strengths and limitations of punch, shave (tangential excision), lateral longitudinal excision, and nail fold biopsy.
- Know how to perform lateral matricectomies, including lateral longitudinal excision and chemical ablation (e.g., phenol, trichloroacetic acid, sodium hydroxide).
- Know how to perform nail excisions, including central longitudinal excision with flap closure, and en bloc excision of the entire nail bed and matrix with full thickness skin graft repair.
- Educate the patient about what to expect during surgery and postoperatively.
- Provide postoperative care and manage complications.

SECTION #4: BASIC SCIENCE RELATED TO MSDO

Understand fundamentals of carcinogenesis related to dermatology.

- Understand basic principles of carcinogenesis and terminology: e.g., DNA repair, oncogene, tumor suppressor, apoptosis, cell cycle, epigenetics.
- Identify predisposing factors relevant to dermatology: e.g., ultraviolet radiation, ionizing radiation, arsenic, human papillomavirus, Merkel cell polyomavirus, and immunosuppression.
- Understand what types of ultraviolet radiation exposure (acute, episodic, cumulative) relate to different types of skin cancer.
- Identify major cellular pathways involved in the development of skin cancers, including basal cell carcinoma, squamous cell carcinoma, melanoma, and dermatofibrosarcoma protuberans, and treatments related to these pathways.
- Understand how stem cells may be involved in carcinogenesis and how stem cell involvement may affect treatment decisions.
- Understand the concept of “field effect” in carcinogenesis and how this applies to actinic keratosis and squamous cell carcinoma development in human epithelia.

Understand principles of evidence-based medicine relevant to dermatology. (ABD code 1.3.2)

- Understand basic statistical terminology: type of variables (e.g., continuous); normal v. skewed distributions; mean, median, and mode; standard deviation and standard error of the mean; parametric v. non-parametric tests; statistical significance; power; confidence interval; type I and type II error.
- Understand basic clinical research terminology: types of clinical studies; bias and confounding; association v. causation; prevalence v. incidence; sensitivity v. specificity.
- Recognize strengths and weaknesses of various study designs.
- Understand the strengths and limitations of Cochrane reviews.
- Know the basic principles underlying the Strength of Recommendation Taxonomy (SORT) method for grading medical evidence in the literature.

Understand fundamentals of photobiology relevant to dermatology.

- Understand the concept of electromagnetic spectrum, where UVA, UVB, and ionizing radiation fit in that spectrum, and their impact on skin cancer risk.
- Understand the basic mechanism of action and potential side effects of photodynamic therapy.
- Know the mechanisms of photoprotection of chemical and physical sunscreens, and their optimal use.

Understand fundamentals of pharmacology relevant to MSDO.

- Know the mechanisms of action and side effects of pharmacologic agents used in dermatologic surgery.
- Know the general mechanism of action of pharmacologic agents potentially conferring an increased risk for complications in dermatologic surgery, for example, anticoagulants and immunosuppressive medications.

Understand fundamentals of wound healing.

- Articulate the four major phases of wound healing (hemostasis, inflammation, proliferation, tissue remodeling) and their chronology.
- Understand the roles of different cell types, including platelets, neutrophils, macrophages, and fibroblasts.
- Identify extracellular factors that promote or impede wound healing.

Understand the physical effects of cryotherapy.

- Know the temperature of liquid nitrogen.
- Know which cell types are most susceptible to destruction by liquid nitrogen.

SECTION #5: MEDICATIONS AND OTHER NON-SURGICAL TREATMENTS

Antimicrobial agents

- Know clinical settings in which prophylactic pre-, peri-, or post-operative antibiotics are indicated.
- Know or know where to find the cost, correct dose, and duration of prophylactic antibiotics.
- Recognize allergic contact dermatitis from topical antibiotics.
- Know when, if ever, topical antibiotics are indicated.

Retinoids

- Know strengths and limitations of topical retinoids in the treatment of pre-cancerous and cancerous lesions.
- Know indications, strengths, limitations, risks, contraindications, details of use, and monitoring of oral retinoids for inhibition of development of squamous cell carcinoma in selected patients.

Corticosteroids

- Know how to administer intralesional corticosteroid, to include injection techniques, dosing, and frequency of reapplication.
- Recognize dermal atrophy from corticosteroids and its potential adverse effect on deep suturing.
- Know how much exposure to systemic corticosteroid is typically required to produce significant dermal atrophy (usually > 5 mg/day for > 1 year).

Immunomodulators

- Know the clinical settings in which topical immunomodulators are indicated, their strengths and limitations, relative efficacy, cost, dosing, monitoring for and treatment of side effects, and settings in which adjuvant post-operative therapy may be valuable.
- Know the clinical settings in which intralesional immunomodulators are indicated, their strengths and limitations, relative efficacy, cost, dosing, and monitoring for and treatment of side effects.
- Know the clinical settings in which systemic immunomodulators are indicated, their strengths and limitations, relative efficacy, cost, dosing, and monitoring for and treatment of side effects.
- Understand risks of carcinogenicity of different immunosuppressive agents, including combinations of immunosuppressive agents such as those used to treat organ transplant recipients.

Chemotherapeutic agents

- Know the clinical settings in which topical chemotherapeutic agents are indicated, their strengths and limitations, relative efficacy, cost, dosing, monitoring for and treatment of side effects, and settings in which adjuvant post-operative therapy may be valuable.

- Know the clinical settings in which intralesional chemotherapeutic agents or chemowraps are indicated, their strengths and limitations, relative efficacy, cost, dosing, and monitoring for and treatment of side effects.
- Know the clinical settings in which systemic capecitabine is indicated, its strengths, limitations, relative efficacy, cost, dosing, and monitoring for and treatment of side effects.

Biologic modifiers

- Know the indications, strengths, limitations, efficacy, relative costs, monitoring and side effects of hedgehog pathway inhibitors for basal cell carcinoma.
- Know the indications, strengths, limitations, efficacy, relative costs, monitoring and side effects of EGF receptor inhibitors for squamous cell carcinoma.
- Know the indications, strengths, limitations, efficacy, relative costs, monitoring and side effects of BRAF, MEK, and c-KIT inhibitors for melanoma.
- Know the indications, strengths, limitations, efficacy, relative costs, monitoring and side effects of imatinib for dermatofibrosarcoma protuberans.

Anticoagulants

- Understand the process of clot formation, intrinsic and extrinsic pathways, platelet plug formation, and the impact of different anticoagulants and hemostatic agents on the various stages of this process.
- Know the time frames required for discontinuing different agents to normalize coagulation, and the risks of causing postoperative bleeding associated with individual agents and combinations of causing postoperative bleeding.
- Know safe INR values for cutaneous surgery.
- Recognize when anticoagulation therapy is medically necessary, and understand the importance of not stopping medically-necessary anticoagulation therapy for skin surgery procedures.

Other topical and systemic agents

- Know the active ingredients in sunscreens, their strengths and limitations, the difference between chemical and physical agents, and their use.
- Know the clinical settings in which topical diclofenac is indicated, its strengths and limitations, relative efficacy, cost, dosing, and monitoring and treatment of side effects.
- Know the clinical settings in which topical ingenol mebutate is indicated, its strengths and limitations, relative efficacy, cost, dosing, and monitoring and treatment of side effects.
- Know the clinical settings in which oral nicotinamide is indicated, its strengths and limitations, relative efficacy, cost, dosing, and monitoring and treatment of side effects.

Photodynamic therapy

- Know the light sources and oral and topical photosensitizers that are available.
- Know how to perform photodynamic therapy, its indications, strengths and weaknesses, relative efficacy, cost, and how to monitor for and treat side effects.

Radiation therapy

- Understand the definitions and the relative strengths and limitations of ionizing radiation, electron beam therapy, and brachytherapy.
- Know the strengths, limitations, relative efficacy, and side effects of radiation therapy versus other therapies for definitive treatment of primary skin cancers.
- Know the setting in which radiation therapy is valuable as primary treatment and those in which it is valuable as adjuvant postoperative therapy.
- Know the relative frequency and duration of typical radiation therapy interval and relative cost.
- Understand the clinical settings in which radiation therapy is often contraindicated, including nevoid basal cell carcinoma syndrome, verrucous carcinoma, and certain body locations.
- Know the situations in which NCCN guidelines recommend radiation therapy for the treatment of primary, regional, and metastatic basal cell carcinoma, squamous cell carcinoma, melanoma, Merkel cell carcinoma, and dermatofibrosarcoma protuberans.
- Know details of AAD position statement on superficial radiation therapy and electronic surface brachytherapy.

SECTION #6: ETHICS AND COMMUNICATION

Practice in an ethical manner.

Involve the patient in decision-making.

Articulate clearly the risks and benefits of management choices.

Communicate clearly with the patient and/or the patient's proxy.

- Understand the risks, benefits, and alternatives for all procedures performed, and communicate those effectively to the patient.
- Understand the natural history of each condition if left untreated.
- Know how to obtain proper informed consent from a patient.
- Know the communication responsibilities for informed consent for deaf patients, patients with limited capacity for understanding, those who speak only foreign languages, those who have legal guardians, and pediatric patients.
- Know when to involve pediatric patients in their care, and the difference between consent and assent.
- Know how to recognize and respond to issues created by difficult patients during the consenting process, including patients who are angry, passive-aggressive, narcissistic, sociopathic, have borderline personalities, or have body dysmorphic syndrome.
- Know how to respond to medical errors and/or adverse events, discuss them with a patient, and communicate them as needed to the medical community.
- Know AMA guidelines regarding appropriate versus inappropriate gifts, payments or other remunerations from industry.
- Recognize the importance of disclosing potential conflicts of interest to any party that would be affected by them.
- Educate patients about sun protection, sun avoidance, protective clothing, and sunscreen use.
- Educate patients about skin cancer and self-monitoring of skin lesions.

Practice ethical principles of coding and billing.

- Know how to choose appropriate CPT codes for all surgery-related procedures, including biopsies (all body sites); destruction; incision and drainage; nail surgery; skin excisions (benign and malignant); soft tissue excisions (all body sites); simple, intermediate and complex closures; adjacent tissue transfers; delayed interpolation flaps; and skin and cartilage grafts.
- Know how to use all surgery-related modifiers, including -25, -51, -59, -78, and -79.
- Know how to use surgery-related ICD-10 codes appropriately for all body sites, including codes for basal cell carcinoma, squamous cell carcinoma, squamous cell carcinoma-in-situ, melanoma, melanoma-in-situ, malignancy not otherwise specified, neoplasm of uncertain behavior, and actinic keratosis.

SECTION #7: QUALITY, SAFETY, AND SYSTEMS-BASED PRACTICE

Apply principles of quality and safety in clinical practice.

- Adhere to the JCAHO recommendations for pre-operative time-out with confirmation of correct patient, correct surgery, and correct site.
- Know how to use the concept of practice gaps to improve performance.
 - Understand the concept of practice gaps.
 - Understand the four-step Plan-Do-Study-Act process used to improve practice gaps.
 - Identify practice gaps in one's own clinical practice or institution.
 - Know where to find resources for practice improvement, e.g., ABD MOC practice improvement modules.
- Understand the importance of developing and maintaining individual systems-based practices to prevent errors, e.g., procedures for biopsy report follow-up, patient no shows, and proper documentation for billing and coding.
- Know the requirements for maintaining ABD certification.

Coordinate care with other care providers.

- Understand the importance of follow-up communication with other caregivers and involved in the patient's care.
- Articulate clearly to other providers the reasons for consultation, referral, or transfer of care.

Demonstrate familiarity with medicolegal issues.

- Know the most common situations associated with legal action by the patient in dermatologic surgery.
- Understand how communication, empathy, awareness of personality styles that can lead to interpersonal conflicts, preventing patient perceptions of abandonment, dealing appropriately with the angry patient, knowing how to apologize, and utilizing appropriate consultations can help prevent the initiation of legal action by the patient.
- Understand both the physician and the patient obligations once a patient-physician relationship has begun, and the required steps to take if termination of the relationship is desired.
- Know when, if ever, it is not necessary to send excised tissue for histopathologic evaluation.
- Understand requirements for consent and communication (see sections on ethical practice).

Comply with requirements of relevant regulatory authorities.

- Understand rules and regulations pertaining to scope of practice and billing for physician extenders such as nurses, nurse practitioners, and physician assistants.
- Understand HIPAA regulations for a dermatology office.

- Know how to communicate with patients in a HIPAA-compliant fashion by phone, mail, email, and social media, and how to handle third-party requests for information about patients.
- Know CLIA regulations for a Mohs micrographic surgery laboratory.
- Know OSHA regulations for worker safety that apply to a dermatology office and surgery.
- Understand the ADA regulations concerning the rights of individuals with disabilities in a dermatology office.

SECTION #8: SPECIFIC CONDITIONS RELATED TO MSDO

Choose appropriate management options for actinic keratosis.

- Know the details of using, and the strengths and weaknesses of, the various techniques available for treating actinic keratosis, including liquid nitrogen (spray and applicator), topical 5-fluorouracil, topical imiquimod, topical ingenol mebutate, topical diclofenac, photodynamic therapy (including daylight), chemical peels, lasers, 5-fluorouracil chemowraps, and curettage for hypertrophic actinic keratosis.
- Understand the concept of field cancerization and know when field treatment of lesions is appropriate.

Choose appropriate management options for keratoacanthoma.

- Know the natural history of keratoacanthoma.
- Know the association of keratoacanthoma with surgical scar and with genetic disorders.
- Know therapeutic options including observation, intralesional 5-fluorouracil intralesional methotrexate, and surgical removal.

Diagnose and appropriately manage non-melanoma skin cancer.

- Understand advantages and disadvantages of treatment options for non-melanoma skin cancer, including electrodesiccation and curettage, excision, cryotherapy, Mohs micrographic surgery, and radiation therapy.
- Understand what features indicate increased risk of recurrence or metastasis.
- Know how to modify management for immunosuppressed patients.
- Understand treatment and adjunctive options for advanced disease, including retinoids, immunomodulators, chemotherapeutic agents, biologic modifiers, radiation therapy, and sentinel lymph node biopsy.
- Know chemoprophylaxis options, e.g., nicotinamide, for high-risk patients.
- Know surgical issues, evaluation and management, and prognosis related to uncommon malignant adnexal neoplasms, including sebaceous carcinoma, microcystic adnexal carcinoma, eccrine carcinoma, and extramammary Paget disease.
- Know the clinical settings in which sentinel lymph node biopsy is potentially useful.
- Know guidelines of care.
 - AAD guidelines of care for non-melanoma skin cancer
 - Appropriate use criteria (AUC) guidelines for Mohs micrographic surgery
 - NCCN guidelines of care for basal cell carcinoma, squamous cell carcinoma, Merkel cell carcinoma, and dermatofibrosarcoma protuberans
 - AAD position statement on superficial radiation therapy and electronic surface brachytherapy

- Demonstrate familiarity with staging systems for cutaneous cancers.
 - AJCC staging of Merkel cell carcinoma and squamous cell carcinoma
 - Brigham and Women's staging of squamous cell carcinoma

Evaluate and appropriately manage benign and atypical nevi.

- Understand prognosis for congenital, atypical, and Spitz nevi.
- Know areas of consensus and lack of consensus for treating and following congenital nevi, atypical nevi, Spitz nevi, atypical Spitz nevi, and deep penetrating nevi.
- Know methods of following patients with nevi.
- Know which congenital nevi, if any, should have evaluation for CNS involvement.

Diagnose and appropriately manage melanoma and melanoma-in-situ.

- Recognize epiluminescent microscopic (dermatoscopic) characteristics of melanoma.
- Know how to manage familial atypical multiple mole and melanoma syndrome.
- Know areas of consensus and lack of consensus about diagnosis and treatment of desmoplastic melanoma.
- Use Wood's light to identify lentigo maligna melanoma margins.
- Know how to treat clinically ill-defined melanoma and melanoma-in-situ.
- Know areas of consensus and lack of consensus regarding margins for melanoma and melanoma-in-situ.
- Know guidelines of care and staging systems.
 - AAD guidelines
 - NCCN guidelines
 - AJCC staging system
- Know management options for advanced disease, including radiologic tests and sentinel lymph node biopsy, immunomodulators, chemotherapeutic agents, and biologic modifiers.

Diagnose and choose appropriate management for Kaposi sarcoma.

- Know the various clinical associations with Kaposi sarcoma.
- Understand the use of intralesional 5-fluorouracil, intralesional metrotrexate, and topical targretin gel.

Diagnose and choose appropriate management for angiosarcoma.

- Know the histochemical profile for angiosarcoma.
- Know therapeutic options including surgery, radiation, and anti-angiogenesis agents.

Diagnose and choose appropriate management for Merkel cell carcinoma.

- Know the characteristic clinical presentations and histochemical profile for Merkel cell carcinoma.

- Know therapeutic options including excision, wide excision, Mohs micrographic surgery, radiation therapy, and chemotherapy, and the role of lymph node evaluation.
- Know NCCN guidelines of care.

Diagnose and choose appropriate management for dermatofibrosarcoma protuberans.

- Understand the chromosomal abnormality underlying its development and its relationship to possible therapies.
- Know NCCN guidelines of care.
- Understand therapeutic options including excision, wide excision, Mohs micrographic surgery, radiation therapy, and imatinib.

Diagnose and choose appropriate management for atypical fibroxanthoma (AFX) and undifferentiated pleomorphic sarcoma (UDPS).

- Know the histochemical profiles of AFX and UDPS and how to distinguish the two.
- Develop an appropriate treatment plan for each.
- Know where each typically metastasizes.
- Understand complications that may occur from incising into the tumor.

Choose appropriate surgical therapies for cutaneous lymphomas.

- Identify situations where surgical therapy is indicated for cutaneous lymphomas.

Understand special considerations related to skin cancer risk in immunosuppressed patients.

- Understand which groups of patients are at risk, including organ transplant recipients, bone marrow transplant recipients, and patients with chronic lymphocytic leukemia, and know the individual risk factors within each group.
- Understand the importance of frequent and aggressive follow-up.
- Know which skin cancers show increased frequency and morbidity.
- Know therapeutic options for treatment of pre-cancers and early cancers, including topical therapies, photodynamic therapy, chemowraps, among others; and treatment options for skin cancers including destructive techniques, excision, Mohs micrographic surgery, and radiation therapy.
- Know the therapeutic systemic options for preventing further skin cancer development and/or disease progression including oral retinoids, capacitabine, EGFR inhibitors, and altering or decreasing total immunosuppressive levels.
- Understand relative carcinogenicity of the different immunosuppressive agents used in organ transplant recipients, and typical combination regimens.

- Know how to work with transplant teams to care for organ transplant recipients, and the importance of dermatology input regarding transplant eligibility in patients with a history of squamous cell carcinoma or melanoma.

Know how to recognize, evaluate, and manage patients with genetic syndromes or developmental anomalies conferring increased risk for skin cancer formation.

- Nevoid basal cell carcinoma syndrome
- Keratoacanthoma syndromes
- Familial atypical multiple mole and melanoma syndrome
- Xeroderma pigmentosum
- Muir-Torre
- Dystrophic epidermolysis bullosa
- Albinism
- Rothmund-Thomson
- Bloom
- Rombo
- Bazex-Christol-Dupré
- Epidermodysplasia verruciformis
- Nevus sebaceus (benign and malignant tumors)