

ADMINISTRATION



Br 1

January 14, 2010

Nuclear Materials
Medical Branch
Nuclear Regulatory Commission, Region I
King of Prussia, PA 19406

To Whom It May Concern:

Re: Addition of Anwar M. Khan, M.D., NRC License #06-00649-03
Deletion of Stacy Spooner, M.D., NRC License #06-00649-03
Deletion of Steven Zivin, M.D., NRC License #06-00649-03

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REGION I
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Anwar M. Khan, M.D.

We are requesting the addition of Anwar M. Khan, M.D., to License #06-00649-03. The authorization requested for Dr., Khan is for 35.400 Manual Brachytherapy Sources.

Enclosed please find the following:

1. Dr. Khan's ABR Certificate
2. Dr. Khan's CV
3. NRC Form 313A listing Dr. Bruce Haffty as the supervising individual at Yale New Haven Hospital
4. A letter from Michael J. Bohan, a Yale New Haven RSO, stating that Dr. Haffty is on the Yale License #06-00819-03 as an authorized user for the 35.400 Manual Brachytherapy Sources.

Stacey Spooner, M.D.

Please remove Stacey Spooner, M.D. from our License #06-00649-03.

Steven Zivin, M.D.

Please remove Steven Zivin, M.D. from our License #06-00649-03

Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Harry Evert'.

Harry Evert
Vice President, Administration

Attachments

28 Crescent Street
Middletown, Connecticut 06457-3650

tel 860 344-6000
fax 860 346-5485

144380

MIDDLESEX HOSPITAL

The American Board of Radiology

*Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology, the Association of
University Radiologists, and American Association of Physicists in Medicine*

Hereby certifies that

Anwar M. Khan, MD

*Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of
The American Board of Radiology*

On this seventh day of June, 2005

*Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of*

Radiation Oncology



Steven A. Gahm, M.D.
President

Richard T. Hoppe MD
Secretary-Treasurer

R.P. Hatten, MD
Executive Director



Certificate No. 51819

Valid through 2015

ANWAR M. KHAN, M.D.

Business Address:

Central CT Radiation Oncology, PC
536 Saybrook Road
Middletown, CT 06457
(860) 358-2100

Home Address:

EXPERIENCE:

- | | |
|------------------------|---|
| 3/2008 – Now | Radiation Oncologist
<i>Central Connecticut Radiation Oncology, PC</i>
1) <i>Middlesex Hospital Cancer Center, Middletown, CT</i>
2) <i>New Britain General Hospital, New Britain, CT</i> |
| 7/2003 – 6/2008 | Assistant Professor and Attending Physician
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Therapeutic Radiology</i>
<i>New Haven, CT</i> |
| 7/2003 – 6/2008 | Attending Physician
<i>Lawrence and Memorial Hospital</i>
<i>Community Cancer Center</i>
<i>New London, CT</i> |
| 7/2003 – 6/2008 | Attending Physican
<i>West Haven Veterans Affairs Medical Center</i>
<i>West Haven, CT</i> |

TRAINING:

- | | |
|--------------------|---|
| 2002 – 2003 | Chief Resident
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Therapeutic Radiology</i>
<i>PGY 7</i> |
| 1999 – 2001 | Resident
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Therapeutic Radiology</i>
<i>PGY 4-6</i> |
| 1997 – 1999 | Resident
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Internal Medicine</i>
<i>PGY 2-3</i> |

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| 7/2003 – 6/2008 | Attending Physician
<i>Lawrence and Memorial Hospital</i>
<i>Community Cancer Center</i>
<i>New London, CT</i> |
| 7/2003 – 6/2008 | Attending Physician
<i>West Haven Veterans Affairs Medical Center</i>
<i>West Haven, CT</i> |

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|--------------------|---|
| 2002 – 2003 | Chief Resident
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<i>Department of Therapeutic Radiology</i>
<i>PGY 7</i> |
| 1999 – 2001 | Resident
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Therapeutic Radiology</i>
<i>PGY 4-6</i> |
| 1997 – 1999 | Resident
<i>Yale University – Yale New Haven Hospital</i>
<i>Department of Internal Medicine</i>
<i>PGY 2-3</i> |

1996 – 1997

Intern

*Yale University – Yale New Haven Hospital
Department of Internal Medicine
PGY 1*

EDUCATION:

M.D.

Yale University School of Medicine, 1991 – 1996
New Haven, CT

B.S.

Brown University, 1987 – 1991
Providence, RI
Molecular Biology

B.A.

Brown University, 1987 – 1991
Providence, RI
Engineering

H.S.

Stuyvesant High School, 1984 – 1987
Manhattan, NY

BOARD CERTIFICATIONS:

2005

American Board of Radiology (Radiation Oncology)

1999

American Board of Internal Medicine

1993 - 1996

USMLE Steps 1, 2, 3

BIOMEDICAL INSTRUMENTATION DESIGN & RESEARCH PROJECTS:

Yale University

- *Analyzed the algorithmic behavior of conventional, non-invasive, oscillometric blood pressure monitoring systems in an effort to characterize and quantify the errors that occur in automatic blood pressure estimation as a function of patient-related variables (carried out digital interface design, clinical data collection, signal processing, statistical analysis)*
- *Participated in development of mathematical models and associated hardware & software interface aimed at collecting data to non-invasively estimate the in-vivo compliance of human vascular system based on reconstruction of pressure-volume curves*

Brown University

- *Designed and constructed a fully-functional, computer-driven data acquisition system to digitally record and process both biological and non-biological data in real time for use in biomedical engineering laboratories*
- *Designed and constructed a fully-functional, prototypic module involving both hardware and software implementation for controlling general-purpose spectrophotometers via computers*
- *Designed an electromechanical transducer using fiber-optics technology to analyze and study in-vivo muscle movement patterns on computers while ensuring minimal signal corruption due to presence of adjacent bioelectrical noise*
- *Assisted in designing a computer-controlled technique for identifying the animal pole in albino xenopus oocytes on the basis of the differential electrical field generated by the Na^+/K^+ activity*

SCHOLASTIC AWARDS:

Medical School

- *Honors in Clinical Clerkships (Internal Medicine Sub-Internship, Internal Medicine, Plastic Surgery, Neurosurgery)*
- *Honors in Basic Science Courses (Neuroscience, Neuroanatomy, Molecular & Cellular Biology, Anatomy)*

Undergraduate University

- *Sigma Xi Honorary Scientific Research Society*
- *National Merit Scholarship for Academic Excellence*
- *Westinghouse Research Award*
- *Honors in College Science Courses (Physics, Organic Chemistry, Biology, Advanced Calculus, Electrical Circuit Design & Analysis, Biomedical Instrumentation Design)*

SCIENTIFIC PUBLICATIONS:

Khan AM, Smith B. *Essential Tools for Radiation Oncologists. Handbook of Radiation Oncology: Basic Principles and Clinical Protocols. Chapter 7. Jones and Bartlett. [2009]*

Yu JB, Khan AM, Jones GW, Reavely MM, Wilson LD. *Patient Perspectives Regarding the Value of Total Skin Electron Beam Therapy for Cutaneous T-Cell Lymphoma / Mycosis Fungoides – A Pilot Study. Amer J Clin Oncol 2009 Mar 20*

Colberg JW, Decker RH, Khan AM, McKeon A, Wilson LD, Peschel RE. Surgery versus Implant for Early Prostate Cancer: Results from a Single Institution, 1992-2005. Cancer J. 13(4):229-32, 2007

Peschel RE, Khan A, Colberg J, Wilson LD. The Effect of Age on Prostate Implantation Results. Cancer J. 12(4):305-8, 2006

TRIAL INVESTIGATORSHIP :

"Evaluation of Pattern of Failure and Survival in Patients that Underwent surgery, chemotherapy and/or radiotherapy for Squamous Cell Carcinoma, Basaloid subtype, Head & Neck Cancer". Co-Investigator [Yale Study]

"Accelerated fractionation with the concomitant boost technique in combination with chemotherapy in the management of head and neck cancer-A phase I/II clinical trial". Co-Investigator [Yale Study]

LECTURES & PRESENTATIONS:

- *Numerous lectures and presentations on various oncology topics*
- *Regular sessions with residents for clinical skills*
- *Poster presentations at conferences*

MENTORSHIP & TEACHING EXPERIENCE:

- *Thesis advisor*
- *Mentor for students and residents*
- *Served as teaching assistant for several advanced biomedical engineering, and biology courses and laboratories at Brown University*
- *Served as computer programming assistant for classes teaching Pascal, LabView, C programming*

EXTRACURRICULAR ACTIVITIES & INTERESTS:

- *Extensive volunteer involvement with local communities during college and medical school in coordinating constructive activities for youngsters (Role-Model and Big-Brother programs, HIV awareness, Anti-Violence)*
- *Community service awards received for participation in Adult Literacy Programs, campus-based blood drives, etc*

PERSONAL:

- *Married*
- *US Citizen*

**AUTHORIZED USER TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION**
(for uses defined under 35.400 and 35.600)
[10 CFR 35.490, 35.491, and 35.690]APPROVED BY OMB: NO. 3150-0120
EXPIRES: 3/31/2012

Name of Proposed Authorized User

Anwar M. Khan

State or Territory Where Licensed

CT

Requested☒ 35.400 Manual brachytherapy sources ☐ 35.600 Teletherapy unit(s)**Authorization(s)**☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

(check all that apply)

☐ 35.600 Remote afterloader unit(s)**PART I -- TRAINING AND EXPERIENCE**
(Select one of the three methods below)

* Training and Experience, including Board Certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☐ **1. Board Certification**

- Provide a copy of the board certification.
- For 35.600, go to the table in 3.e. and describe training provider and dates of training for each type of use for which authorization is sought.
- Skip to and complete Part II Preceptor Attestation.

☐ **2. Current 35.600 Authorized User Requesting Additional Authorization for 35.600 Use(s) Checked Above**

- Go to the table in section 3.e. to document training for new device.
- Skip to and complete Part II Preceptor Attestation.

☒ **3. Training and Experience for Proposed Authorized User**

- Classroom and Laboratory Training ☒ 35.490 ☐ 35.491 ☐ 35.690

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	Yale University (Residency Program)	120	7/1/1999 - 6/30/2003
Radiation protection	"	15	"
Mathematics pertaining to the use and measurement of radioactivity	"	15	"
Radiation biology	"	100	"
Total Hours of Training:		250	

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

b. Supervised Work and Clinical Experience for 10 CFR 35.490 (If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.)

Supervised Work Experience		Total Hours of Experience: 500	
Description of Experience Must Include:	Location of Experience/License or Permit Number of Facility	Confirm	Dates of Experience*
Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys	Yale New Haven Hospital 06-00819-03	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7/1/1999 - 6/30/2003
Checking survey meters for proper operation	"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	"
Preparing, implanting, and safely removing brachytherapy sources	"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	"
Maintaining running inventories of material on hand	"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	"
Using administrative controls to prevent a medical event involving the use of byproduct material	"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	"
Using emergency procedures to control byproduct material	"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	"

Clinical experience in radiation oncology as part of an approved formal training program	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Approved by: <input checked="" type="checkbox"/> Residency Review Committee for Radiation Oncology of the ACGME <input type="checkbox"/> Royal College of Physicians and Surgeons of Canada <input type="checkbox"/> Committee on Postdoctoral Training of the American Osteopathic Association	Yale New Haven Hospital 06-00819-03	7/1/1999 - 6/30/2003
Supervising Individual Bruce Haffty, MD	License/Permit Number listing supervising individual as an Authorized User 06-00819-03	

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

c. Supervised Clinical Experience for 10 CFR 35.491

Description of Experience	Location of Experience/License or Permit Number of Facility	Clock Hours	Dates of Experience*
Use of strontium-90 for ophthalmic treatment, including: examination of each individual to be treated; calculation of the dose to be administered; administration of the dose; and follow up and review of each individual's case history			
Supervising Individual		License/Permit Number listing supervising individual as an Authorized User	

d. Supervised Work and Clinical Experience for 10 CFR 35.690

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

Supervised Work Experience		Total Hours of Experience:	
Description of Experience Must Include:	Location of Experience/License or Permit Number of Facility	Confirm	Dates of Experience*
Reviewing full calibration measurements and periodic spot-checks		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Preparing treatment plans and calculating treatment doses and times		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Using administrative controls to prevent a medical event involving the use of byproduct material		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Checking and using survey meters		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Selecting the proper dose and how it is to be administered		<input type="checkbox"/> Yes <input type="checkbox"/> No	

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

d. Supervised Work and Clinical Experience for 10 CFR 35.690 (continued)

Clinical experience in radiation oncology as part of an approved formal training program	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Approved by: <input type="checkbox"/> Residency Review Committee for Radiation Oncology of the ACGME <input type="checkbox"/> Royal College of Physicians and Surgeons of Canada <input type="checkbox"/> Committee on Postdoctoral Training of the American Osteopathic Association		
Supervising Individual	License/Permit Number listing supervising individual as an Authorized User	

e. For 35.600, describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Device operation			
Safety procedures for the device use			
Clinical use of the device			
Supervising Individual. <i>If training provided by Supervising Individual (If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.)</i>		License/Permit Number listing supervising individual as an Authorized User	
Authorized for the following types of use: <input type="checkbox"/> Remote afterloader unit(s) <input type="checkbox"/> Teletherapy unit(s) <input type="checkbox"/> Gamma stereotactic radiosurgery unit(s)			

f. Provide completed Part II Preceptor Attestation.

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

By checking the boxes below, the preceptor is attesting that the individual has knowledge to fulfill the duties of the position sought and not attesting to the individual's "general clinical competency."

First Section

Check one of the following for each requested authorization:

For 35.490:

Board Certification

☐ I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Authorized User

35.490(a)(1) and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under 10 CFR 35.400.

OR

Training and Experience

☒ I attest that Anwar M. Khan has satisfactorily completed the 200 hours of
Name of Proposed Authorized User

classroom and laboratory training, 500 hours of supervised work experience, and 3 years of supervised clinical experience in radiation oncology, as required by 10 CFR 35.490(b)(1) and (b)(2), and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under 10 CFR 35.400.

For 35.491:

☐ I attest that _____ has satisfactorily completed the 24 hours of
Name of Proposed Authorized User

classroom and laboratory training applicable to the medical use of strontium-90 for ophthalmic radiotherapy, has used strontium-90 for ophthalmic treatment of 5 individuals, as required by 10 CFR 35.491(b), and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use.

Second Section

For 35.690:

Board Certification

☐ I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Authorized User

35.690(a)(1).

OR

Training and Experience

☐ I attest that _____ has satisfactorily completed 200 hours of classroom
Name of Proposed Authorized User

and laboratory training, 500 hours of supervised work experience, and 3 years of supervised clinical experience in radiation therapy, as required by 10 CFR 35.690(b)(1) and (b)(2).

AND

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

Preceptor Attestation (continued)

Third Section

For 35.690: (continued)

☐ I attest that _____ has received training required in 35.690(c) for device

Name of Proposed Authorized User

operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought, as checked below.

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

AND

Fourth Section

☐ I attest that _____ has achieved a level of competency sufficient to

Name of Proposed Authorized User

achieve a level of competency sufficient to function independently as an authorized user for:

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

Fifth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.490, 35.491, 35.690, or equivalent Agreement State requirements, as an authorized user for:

☒ 35.400 Manual brachytherapy sources ☐ 35.600 Teletherapy unit(s)

☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

☐ 35.600 Remote afterloader unit(s)

Name of Preceptor	Signature	Telephone Number	Date
Joseph Weissberg MD	<i>[Signature]</i>	860-358-2100	12/8/09
License/Permit Number/Facility Name			
06-00649-033 / Middlesex Hospital			



**YALE-NEW HAVEN HOSPITAL
RADIATION SAFETY OFFICE**

December 2, 2009

To whom it may concern,

The purpose of this letter is to certify that Bruce Haffty, M.D., was listed as an authorized user by the Yale-New Haven Hospital (YNHH) Radiation Safety Committee under NRC license 06-00819-03. YNHH is an NRC broad scope, human use licensee.

Dr. Haffty was an attending physician in the Department of Therapeutic Radiology. He was authorized to use byproduct materials for medical use in the following applications:

Subpart F - 35.400 Use of sources for manual brachytherapy
Subpart H - 35.600 Use of sources for remote afterloading & teletherapy units

In addition, Dr. Haffty was also listed as an Authorized User on NRC Specific Scope License No. 06-303445-01, for gamma stereotactic radiosurgery.

If there are any questions concerning Dr. Haffty's training and experience, with regard to radionuclide licensing, please feel free to contact the YNHH Radiation Safety Office at (203) 688-2950.

Sincerely,

Michael J. Bohan
YNHH Radiation Safety Officer

20 York Street
New Haven, CT 06504

This is to acknowledge the receipt of your letter/application dated

1/14/2010, and to inform you that the initial processing which includes an administrative review has been performed.

☒ AMEND. 06-00849-03
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 144380.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.