



21st Century Oncology of Michigan

A Division of Michigan Healthcare Professionals™

January 9, 2014

RADIATION ONCOLOGY

J. Vito Antonucci, M.D.

Medical Degree:
Tufts University School of Medicine, Boston, MA
Residency:
Radiation Oncology, William Beaumont
Hospital, Royal Oak, MI

Ahmed E. Ezz, M.D., M.B., B.Ch., F.R.C.P., C

Medical Degree:
Cairo University, Faculty of Medicine,
Cairo, Egypt
Residency:
Radiation Oncology, London Regional Cancer
Center, London Ontario, Canada
Fellowship:
London Regional Cancer Center, London
Ontario, Canada

Jeffrey D. Forman, M.D., F.A.C.R.

Medical Degree:
New York University School of Medicine
New York, NY
Residency:
Radiation Oncology, John Hopkins Hospital,
Baltimore, MD
Fellowship:
American Cancer Society, Johns Hopkins
Hospital, Baltimore, MD

Michael I. Ghilezan, M.D., Ph.D

Medical Degree:
University of Medicine & Pharmacy "Iuliu
Haieganu", Cluj-Napoca, Romania
Residency:
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"Rene Descartes", Paris, France
Fellowship:
Physics Research in Radiation Oncology,
William Beaumont Hospital, Royal Oak, MI

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Medical Degree:
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Kansas City, KS
Residency:
Radiation Oncology, William Beaumont
Hospital, Royal Oak, MI

Alvaro Martinez, M.D., F.A.C.R.

Medical Degree:
Universidad Javeriana, School of Medicine,
Bogota, Colombia
Residency:
Memorial Sloan Kettering Cancer Center,
New York, New York

Kay T. Miller, M.D.

Medical Degree:
University of New Mexico School of Medicine,
Albuquerque, NM
Residency:
William Beaumont Hospital, Royal Oak, MI

Madhubala Patel, M.D.

Medical Degree:
MGM Medical College, Indore MP, India
Residency:
Radiation Oncology, Henry Ford Hospital,
Detroit, MI

Frank A. Vicini, M.D., F.A.C.R.

Medical Degree:
Wayne State University School of Medicine,
Detroit, MI
Residency:
Radiation Oncology, William Beaumont
Hospital, Royal Oak, MI
Fellowship:
Breast Cancer Joint Center for Radiation
Therapy Harvard Medical School, Boston, MA

Colleen D. Altman, RN CRNP

Nurse Practitioner
Medical Degree:
University of Pennsylvania

Toye L. Simmons
Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Re: License No. 21-26488-01 Control No. 581650

Dear Ms. Simmons,

In response to your letter dated December 24, 2013, we would like to supply you with the following additional information:

1. We confirm that we would like to remove the MIRO-Farmington Hills, Suite 110, 28595 Orchard Lake Road, Farmington Hills, MI location from the license. This location has never received or produced any radioactive materials.
2. The survey meter we will be using is a VICTOREEN FLUKE 451 ION CHAMBER model 451B-RYR and serial 0000001915. This will be calibrated at intervals not exceeding one year.
We reserve the right to upgrade our survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used.
3. We confirm that for radium-223, unit doses only will be used.
4. HDR Spot Check Procedure:

A Daily Quality Control Procedure will be performed in the Unit prior to any medical use of it. The form 'Nucletron - Daily Quality Control Procedures' and 'CT Scanner-Daily Control Checks' (enclosed) will be used to record the information.

The daily check of the HDR device will include at least:

- a. Interlocks:
- b. Door Interlock.
- c. Emergency Push buttons.
- d. Reproducibility of source positions to within plus or minus one millimeter.
- e. Source position indicators.
- f. Source on and off indicators.
- g. Timing device.
- h. Warning lights and alarms.
- i. Area monitor(s).

Clarkston Cancer Center
Midland Medical Ctr #108
6770 Old Highway
Clarkston, MI 48346
Tel: (248) 625-0300
Fax: (248) 625-0363

Farmington Hills Cancer Center
M.L.M.D. Building #110
28595 Orchard Lake Road
Farmington Hills, MI 48334
Tel: (248) 553-0806
Fax: (248) 553-7874

Macomb Cancer Center
17435 Hall Road
Macomb, MI 48044
Tel: (586) 228-0299
Fax: (586) 228-5918

Madison Heights Cancer Center
30385 Desplandre
Madison Heights, MI 48071
Tel: (248) 588-9000
Fax: (248) 588-9006

St. Joseph Mercy
Hospital Campus
70 Fallon Street
Pontiac, MI 48341
Tel: (248) 338-0300
Fax: (248) 338-0863

Troy Cancer Center
4550 Investment Drive
Suite B111
Troy, MI 48068
Tel: (248) 952-9919
Fax: (248) 952-9084

- j. Existence of operator's manual and emergency instructions.
- k. Visual and aural communication devices.
- l. Backup battery charge.
- m. Existence of printer supplies
- n. Existence of emergency container and tools.
- o. Time calculation software integrity.

Under no treatment circumstance will any interlock be authorized to be bypassed by the RSO. If any communication device is not operational, all procedures will be interrupted until it is repaired.

The CT Scanner involved in the set-up procedure is tested for general radiotherapy procedures. A copy of the daily CT Scanner quality control form that describes the checks to be performed is enclosed.

Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey D. Forman". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Jeffrey D. Forman, M.D., RSO

21st Century Oncology, INC. - Facility: _____
BRACHYTHERAPY PROCEDURES
NUCLETRON UNIT DAILY QUALITY CONTROL

Nucletron Unit : _____ Performed by : _____ Date ____ / ____ / ____

Module	Type of Test	Description	P	Criteria P:Pass F:Fail	F
Interlocks	Emergency Stop Switches	Activate & Check		Operational	
	Interrupt Button	Activate & Check		Operational	
	Door Interlock & Switch	Activate & Check		Operational	
	Power Failure Detector	AC Disconnection		Alarm Operational	
Survey	Radiation Area Monitor	Green Light @ Linear Accelerator in 'Beam OFF'		OK	
	Radiation Area Monitor	Flashing @ Linear Accelerator in 'Beam ON' condition		OK	
	Survey Meter	Existing and Operational		OK	
	Survey Meter	Calibrated in the Last year		OK	
Audio/TV	TV Monitor/Camera	Operational		OK	
	Intercom. Device	Operational		OK	
NPS Unit	Date & Time	Verify & Archive Printout		Same Day \pm 30 m	
	Activity	Verify & Archive Printout		Difference = 0.5%	
	Operator's Manual	Available		OK	
Console	Date & Time	Verify & Archive Printout		Same Day \pm 30 m	
	Activity	Verify & Archive Printout		Difference = 0.5%	
	Operator's Manual	Available		OK	
	Emergency Procedures	Posted		OK	
	Console Lights	Operational		OK	
	Primary /Secondary Timer	Pri Count DN-Sec. Count UP		OK	
	Printer Paper	Installed and Available		OK	
Applicators	Applicators' Checks	Actual in Use for any damage or Kinks		No Damage	
Catheters	Catheters' Checks	Actual in Use for any damage or Kinks		No Damage	
& Interfaces	Interfaces & Dummies	Actual in Use for any damage		No Damage	
Mechanic.	Source Position	Ruler w/programmed position		\pm 1 mm of preset	
Safety	Lead Pig in Room	Verify location & availability		Available	
	Safety Tools in Room	Verify location & availability		Available	

Physics or Dosimetry Verification by : _____ on ____ / ____ / ____

This form is to be retained for 3 years.

21st. Century Oncology Inc. - Daily CT Scanner and Laser Positioning Quality Control

Location

Week of

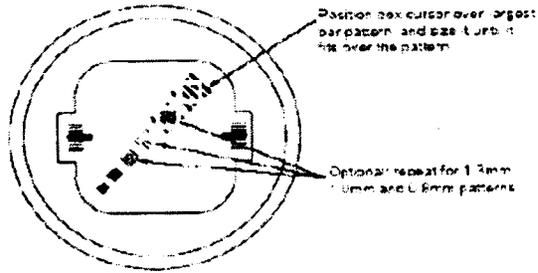
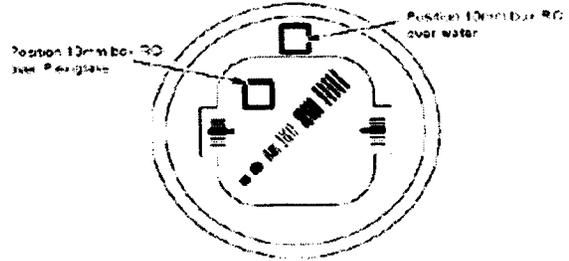
Date	Contrast Scale		High Contrast Spatial	Slice Thickness	Align (Y/N)	Low Contrast Resolution - Mean C		Noise		Laser QA		Initials
	MeanCT#	STD Dev				TOP	BOTTOM	MeanCT#	STDEV	Zero	Offset	
	Plexiglas		1.6 mm			Water						
	Water		1.3 mm			Membrane						
	Difference		1.0 mm			Difference						
			0.8 mm			Holes						
	Plexiglas		1.6 mm			Water						
	Water		1.3 mm			Membrane						
	Difference		1.0 mm			Difference						
			0.8 mm			Holes						
	Plexiglas		1.6 mm			Water						
	Water		1.3 mm			Membrane						
	Difference		1.0 mm			Difference						
			0.8 mm			Holes						
	Plexiglas		1.6 mm			Water						
	Water		1.3 mm			Membrane						
	Difference		1.0 mm			Difference						
			0.8 mm			Holes						
	Plexiglas		1.6 mm			Water						
	Water		1.3 mm			Membrane						
	Difference		1.0 mm			Difference						
			0.8 mm			Holes						

Scan Conditions

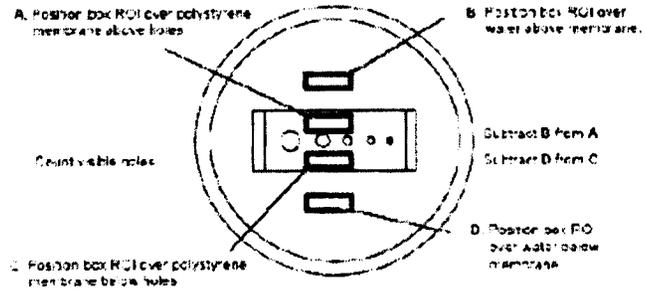
Entry	Head First
Position	Supine
AnatRef	QA
Landmark Location	0 at Line in Phantom
Scan Type	Helical HQ or 0.75-1
Scan Range	IC-S60
Thickness	10
Table Speed	15

Tilt	0 degrees
Scan FOV	Small
kV	120
mA	190
Rotation Speed	1 sec
DFOV	25 cm
Algorithm	Standard
Matrix	512

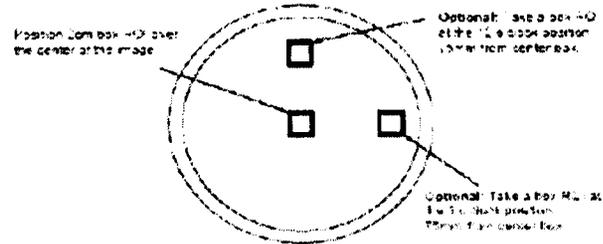
Contrast Scale Phantom Section



Low Contrast Detectability



Noise and Uniformity Section



Simmons, Toye

From: Barreca, Leandro J. <Leandro.Barreca@rtsex.com>
Sent: Friday, January 10, 2014 1:37 PM
To: Simmons, Toye
Subject: RE: Request for information
Attachments: US NRC 1-9-14.pdf

Hi Toye,

Please find attached the information requested.

Best regards, Leandro.

Leandro Barreca, MSEM

Physics & Engineering Dept.
5280 Summerlin Commons Way # 802
Ft Myers FL 33907
C: 239-450-0652
P: 239-768-7377
F: 239-274-0557

-----Original Message-----

From: Simmons, Toye [<mailto:Toye.Simmons@nrc.gov>]
Sent: Tuesday, December 24, 2013 11:33 AM
To: Barreca, Leandro J.
Subject: Request for information

Mr. Barreca, I have been assigned to work on the license renewal for American Oncologic Associates of Michigan. Attached is a request for additional information needed in order for me to complete my review.

If you have any questions, feel free to contact me.

Toye L. Simmons
Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352
Office: (630) 829-9842
Fax: (630) 515-1078