

Scintillator



Erin Grady, MD

From the desk of the president...

If you missed the SNM Annual Meeting in Salt Lake City, Utah, you missed a number of interesting research presentations and lectures from people in the field. Some of the more interesting talks were on the current state of pulmonary embolism imaging with Dr. Wells of the Well's Criteria among others. The board review course was a good general review of basic nuclear medicine and the CT course was once again very well done. The NMRO was able to collaborate with the Young Professionals for the Knowledge Bowl which went well this year; the winners will have to defend their title next year! Later in the newsletter I'll review the CV lecture that was given by the Young Professionals.

The NMRO has had a fantastic year. We've really developed the organization and have plans for so much more. This year we've done the following things for YOU:

- Development of the Scintillator Newsletter
- Updating the acnmonline.org website for resident use, this is ongoing and many more upgrades are planned
- Presence on facebook with discussion forums (just "fan" us)
- Collaboration with ACR and the Young Professionals group
- First ever NMRO Networking Luncheon at the SNM Annual Meeting, planning for this to be a semi-annual event.
- Online case of the month
- Resident survey for NM resident needs
- Working to compile an all inclusive question bank for in-training exam and board exam preparation that is readily available to members.

These are just some of the things that are going on, with plans for even bigger and better things. We really want to get more people involved and continue to be advocates for NM residents. Because we want to know what you want, and what is useful for you in the newsletter, we'd appreciate if you'd donate about 3 minutes of your time and fill out a quick survey. It's located at <http://www.surveymonkey.com/s/9GQD3PZ>.

We will be taking nominations for new officers for NMRO. We also want to get more people involved in the leadership of this organization and start a three committees to be lead by interested residents. If you're interested in one of these positions, follow the instructions detailed later in the Scintillator. If you have any questions or concerns, feel free to email me at egrady@lumc.edu.

Best, Erin Grady, MD

First Ever NMRO Resident's Networking Luncheon



M. Leann Smith, MD

One of the exciting events that took place during the annual SNM convention in Salt Lake City recently, was the first ever Resident Networking Luncheon at the Salt Palace Convention Center. All the ACNM NMRO officers were in attendance and there was abundant representation from leadership of the ACNM, SNM and ABNM, including Simin Dadparvar, NMRO advisor, Dominique Delbeke, President of the SNM,

George Segall, vice president of the SNM, Virginia Pappas, CEO of the SNM, Jay Harolds, immediate past president of the ACNM, and present from the American Board of Nuclear Medicine was the Director, Dr. Henry Royal. Attendance exceeded expectations with 61 residents attending.

At the start, a brief presentation by the NMRO president, Erin Grady, was given to the attendees regarding membership benefits of the ACNM Nuclear Medicine Resident's Organization, and then the floor was turned over to the attendees to voice their concerns or post questions to the leadership regarding the current issues that nuclear medicine residents are facing. Many residents took advantage of this opportunity, and important issues were expressed openly, intelligently, honestly and at times emotionally.

The main issues that concern current NM residents that were expressed during this luncheon were:

1. The paucity of job openings for nuclear medicine board certified physicians
2. The practice of nuclear medicine positions being filled by radiology trained physicians with less experience in nuclear medicine than a nuclear medicine trained physician
3. The need for a recognized and accepted avenue or path way for nuclear medicine trained physicians to be certified and then hired to read CT.

It was also evident that residents want to be assured that the leadership of the SNM, ACNM, ABNM and the ACGME are acknowledging these issues and working to help resolve these issues.

There were responses from the leadership in attendance on the issues that were voiced:

1. The SNM has waived fees for posting nuclear medicine job openings on their website. It was suggested that the ACNM/SNM will work to create a more visible job pool arena. Newly

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On the Hunt...Making Your Work Count When Applying for a Nuclear Medicine Physician Position

Erin Grady, MD

If you were unable to attend the “How Not to Write a CV” by Scott Bartley, MD at the SNM 2010 Annual Meeting, fear not. I was able to take notes. He had a lot of helpful advice for CVs, cover letters and interviewing. I’ve also included a few other things that I found useful: online guides, advice I’ve received from my program director and others.

Your Cover Letter:

These should be about 1 page.

A good cover letter is your one shot at getting the reviewer to read the rest of your materials. It should be brief, passionate and substantive. A good guide can be found online at the New England Journal of Medicine <http://www.nejmjobs.org/career-resources/physician-cover-letters.aspx>.

No “Dear Sir or Madam” or “To whom it may concern”

- Know your audience, address it to the person at the institution you’re applying (and spell their name correctly)
- This shows a higher level of interest

If you anticipate the people who review your CV will have questions, explain those potential problems in your cover letter. Don’t use sentences you find online in your letters. Dr. Bartley said that some reviewers have googled a letter or a sentence—be honest and don’t plagiarize.

Your CV:

The average reviewer will spend about 6 minutes on your CV. Make it clear.

- Use bullet points with short words

Formatting is extremely important. If you’re uncertain exactly how to format your CV, ask your program director for a good CV to model yours after. You should include information on, though this list is not inclusive:

- Basic personal information
- Summary of qualifications
- Special skills including certifications, extra training, etc.
- Professional experiences
- Education (after high school), include degrees
- Full publication citations. Reviewers will commonly check publications.
- You may list references, or consider them only on request.

Make sure this document as well as others are small enough to send via email.

Common Pitfalls:

- 1) Proofreading – Use your spell check and make sure your grammar is correct. If you’re not confident you can do this on your own, get professional help. Your GME office at your institution may have people they can recommend. If English is not your native language, getting other people to look at your documents is highly recommended.
- 2) Don’t exaggerate your qualifications – Be honest. This may seem overly basic, but it has been something that many application reviewers have seen (more frequently than you

would guess). Don’t provide inaccurate claims of your accomplishments. You should be able to support all claims in your CV. Keep in mind that most can terminate you for incorrect information whether or not that information was accidental.

- 3) Don’t use vague statements – Be specific. An example that Dr. Bartley used was, “Certified in CT” — Certified by whom? To do what?
- 4) Know the job you’re applying for. Do your homework.

Letters of Recommendation:

Best to have those recommending you send the letters directly to those places requesting letters. These are also best if personalized and signed per Dr. Bartley.

Interviewing:

Know the people, schedule, institution

- You should be able to call ahead to see who will be interviewing you.
- Do your homework and look up all available online information
- Don’t show up too early or late
- Be ready for changes

If you’re interviewing at a private practice location, consider looking up the practice you’re interviewing at on “Health Grades” or a similar online search engine to see how well respected it is in the community.

Know what you’re talking about, and if you don’t know, admit it.

Are you talking about others? Keep in mind that Nuclear Medicine is a small field and is very connected. Dr. Bartley gave the old adage, “If you can’t say anything nice, don’t say anything at all.”

Be prepared.

- If you’re interviewing for an academic position, you may be asked to give a talk. If so, have an alternative format in case of technical problems. Bring a pointer and handouts if necessary.
- If you’re interviewing at a private practice, they may ask you to give a sample read or to see your dictation skills. You may anticipate some protocol discussions.

Resources?

The SNM and RSNA career center websites have a list of available jobs. However, this is far from inclusive. The SNM has done a great job now of waiving the fee for job postings. And, soon they will be hosting a CV posting area. Most jobs in nuclear medicine are rumored to be word of mouth only, so get to meetings, network and work hard.

Considering things “outside the box” may be something we will need to do. Later in this newsletter, a NM physician shares some insights into how they found success.

Dr. George Segal, SNM Vice President mentioned that no additional qualifications are necessary to practice as a NM physician in Canada, Europe or the United Arab Emirates. Other jobs in industry and the military could also be considerations for you. If you’re having problems or concerns, feel free to talk them over with your program director or you could request a NMRO mentor (more details on the acnmonline.org website) who has been through this process and was successful.

Thinking Outside the Box for Jobs

Erin Grady, MD and M. Leann Smith, MD

I was able to have a discussion with a pure NM physician who has definitely thought outside the box when it comes to finding a job. This person has requested to remain nameless, and for the purposes of the remaining article, some non-essential facts have been changed to "protect the innocent."

Our interviewee has completed a nuclear medicine residency and PET/CT fellowship. After graduating, this person joined a practice, and was later able to step out and find solo work. Because of the previously made connections in the area during the time in group practice, it was easier to start from the ground up.

You may have heard rumors of those few NM physicians who have partnerships with local hospitals and who come in to the hospital for 1-2 days per week and read other PET/CTs from home. In discussing with our interviewee, this seems to be a rather rare job opportunity, mostly because most hospitals may have contracted with the hospital radiologists or a radiology group. If for some reason the hospital or NM center has a time of contract negotiation, you might be able to get your foot in the door that way, though again, it was stressed that this is particularly rare.

Keep in mind that this advice has worked for at least one person and may not work for others. The below article is based on one person's experience and opinion. This is also someone who cares about the future of nuclear medicine jobs was kind enough to offer how they found success. Also, keep in mind that NMRO is not advocating certain companies or commercial products.

The following questions were asked:

What are the initial steps in starting your own business, and who should you see in the beginning to get started (accountant, financial advisor, etc.)?

"First, get an LLC." A LLC (a limited liability company) helps with regard to liability reduction. You can get this through the state you will be practicing in, but hiring a lawyer or CPA at the beginning of this process may be a good idea.

"Get [price] quotes from at least 3 coding/billing companies before you choose one."

"Start your own separate bank account for business use only. Use this business account for practice-only costs like transcriptionists, coders, etc. In general it can create a lot of tax headaches if personal and business accounts are merged."

The interviewee does not have an office manager or business manager and felt that starting your own business/LLC can be done without them with some hard work and a little business sense.

When should I start preparing during residency/fellowship?

"You should start at the beginning of your last year of NM residency or if you are doing a fellowship, start at the beginning of the fellowship year."

"Call up the groups in the big cities. Look at the RSNA and SNM websites. Don't be afraid to send your information to both ads looking for nuclear radiology and pure nuclear medicine. I got interviews from both."

Who specifically do you approach in a hospital or at a private PET center to go about requesting to contract to read for them?

"Call the president/head of the group or owner of the PET/CT facility. Before you call, know something about the group first. Research the websites, etc. until you can carry on a useful conversation. Pay attention to who owns the group/center (i.e. if a group/center is owned by a business person or technologist, you may have better luck finding employment than if it was owned by a radiologist).

"If you know somebody in the area, use your connections. If you know other doctors in the hospital setting you're interested in who also know the radiologists, they may be willing to help you out."

Do you recommend mass advertising mailings in your community, mass CV mailings?

"No. Don't send a blind CV; those usually get thrown in the trash."

How did you set up your work station? Are there leasing options and/or do you need to plan/save for an initial amount of money to put down on equipment? What kind of internet connection would I need, do I really need a T1 line?

"I read from my laptop and have cable internet through Comcast or I can use wireless internet when I go out of town and read through an encrypted VPN connection. Your center should be able to help set this up."

"As far as software, the place you read for may have their own. Additionally, you can purchase a software license. Sometimes the company you're purchasing from can give you a payment plan of paying over a year rather than lump sum (e.g. MIM).

"Some places use voice recognition software. Other places use a transcriptionist, and if they do, you'll be paying a transcription fee."

With regard to malpractice insurance, the interviewee pays \$5000/year from a Doctor's Insurance Company out of California (<http://www.thedoctors.com/index.htm>).

Where do you recommend we turn for help in billing, coding, etc.?

"Hire a coding/billing company (get three price quotes first, as above); be specific with them about how they do their coding, and how they key in on the history necessary, etc. You can also ask other people who practice in the same area what company they use."

Do I need separate medical licenses for facilities I'm contracted with if they are in different states?

"Yes."

How do you find contact information for the person you need to speak with at a hospital or private PET/CT center in regards to contracting with them?

"Go online and search. Look for hospitals in the region or imaging centers, etc. Contact the person who owns the center, not one of the doctors reading there since they may not want the competition."

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Interesting History of Nuclear Medicine

M. Leann Smith, MD

Soon after attending the annual SNM conference in Salt Lake City, my quest for interesting nuclear medicine history serendipitously led me to a letter to the editor from a 1964 edition of *The Journal of the Society of Nuclear Medicine*. I hope you enjoy this piece of history as much as I did. For clarification, I believe that when the article states that the reactor “went critical” it means it maintained a chain reaction that sustained itself.

“TO THE EDITOR:

The gavels used by The Society of Nuclear Medicine have a history comparable to their importance in directing the destiny of the Society. In 1857, at the time Professor William Allen Miller was making the first measurement of the far ultraviolet spectrum, squirrels planted walnuts on the site of the graphite reactor now known as Old Grandma, at Oak Ridge, TN. These walnut trees grew during the boyhood of Roentgen, Rutherford, and Thompson, reaching their maturity at the turn of the century when the atomic age reached full flower. When Old Grandma was built, these fine old walnut trees had to be cut down. They were thrown on the scrap heap on February 1, 1943. When Old Grandma went critical on November 4, 1943, those trees lay forgotten. The logs, however, were retrieved from the scrap heap on the sunny afternoon of August 2, 1946, just after the junk picker had attended the ceremonies inaugurating the first shipment of radioisotopes for medical use. Those logs were water cured at the bottom of White Oak Lake (the drainage from Old Grandma) until 1948, during which time they picked up a considerable amount of background radioactivity. This activity was carefully sandblasted off the surface and the wood was air dried in the shadow of the world’s first tower reactor facility. Next, this fine old wood was transferred for further curing to the Roaring Fork Branch of the Little Pigeon River at the foot of the Great Smoky Mountains. After removal from the Roaring Fork the logs were hand sawed into thick planks by a man who had been exposed to the fallout radiation from ten atomic bombs. The famous Wood Whittlers of Gatlinburg, Tennessee then hand turned this beautiful, historic, solid walnut into gavels for the Society of Nuclear Medicine. The gavels now used have this history.

MARSHALL BRUCER, MD “

My quest for the present whereabouts of these historic gavels is ongoing. I will keep The Scintillator updated.

Who, What, When, Where, Why, and How - The Six Honest Serving Men: Results of a Nuclear Medicine Resident Survey

Murthy Chamarthy, MD.

Nuclear Medicine (NM) specialty offers several training pathways and curricula that are vital in preparing a resident for a job or further training. A survey was performed by the NMRO early this year to understand the resident and fellow training concerns with

an emphasis on the current available opportunities and future desirable resources. An anonymous Google survey was sent to nuclear medicine resident trainees in North America. The questions relate to wide areas of the resident training including prior training, reasons for choosing NM, research and CT/MR exposure, on-call/at-work references, future career plans, career information and job market, interactions with colleagues at other programs, and awareness of nuclear medicine organizations.

A total of 62 (62%) responses were recorded. Most of the residents considered research (71%), cross sectional experience (68%) and overall training in NM (81%) at their programs to be adequate. Academic position, radiology residency and private job are among the top three career choices. However, majority of the residents are concerned about the limited job opportunities (86%), inadequate career planning resources (76%) and limited peer interaction (75%). Residents are members of SNM (90%), RSNA (68%), and ACNM/NMRO (34%), and recognize the need for an active nuclear medicine resident organization (75%) as well as expressed interest to participate actively (60%).

Though residency programs seem to provide an overall adequate exposure and training, most of the residents are concerned about the limited career resources, job opportunities, peer interaction and the need for an active resident organization. NMRO would focus and represent the above issues of resident concerns and provide a common platform for all the residents to be actively involved.

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What were the challenges you faced that were unexpected?

“I was really surprised that it took 6 months to get a medicare number. I basically read PET/CT’s from Medicare patients for free during that time. You need to do this as soon as possible if you’re by yourself. If you’re at a center, you don’t need one right away since they likely already have one.

“The Medicare Number forms are on the medicare website. If you have a billing person, imaging center, or are contracting with a hospital, they can do it for you. There are also consultants are out there who can help with this.”

What additional advice would you offer?

“Be persistent. Really sell who you are and what you can do without demeaning the people you’re applying to. They may argue that since you will not take call you may not be of value, however, you must convince them that you do bring value in addition to what the imaging facility or hospital does. You can also argue that since nuclear medicine pays more on average per study than most other radiology studies, you would be able to make up for the lack of call coverage. Additionally, if you’re someone who is active in NM and excited about it, you may really build their practice. Good luck.”

Acute pulmonary embolism detected by perfusion SPECT/CT masquerading as an intermediate probability planar V/Q scan

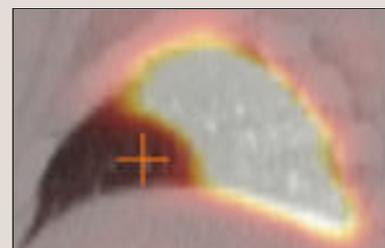
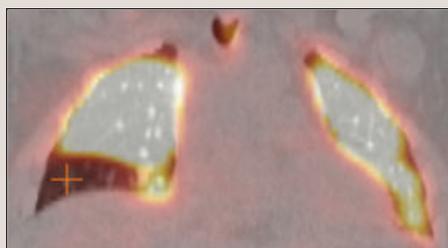
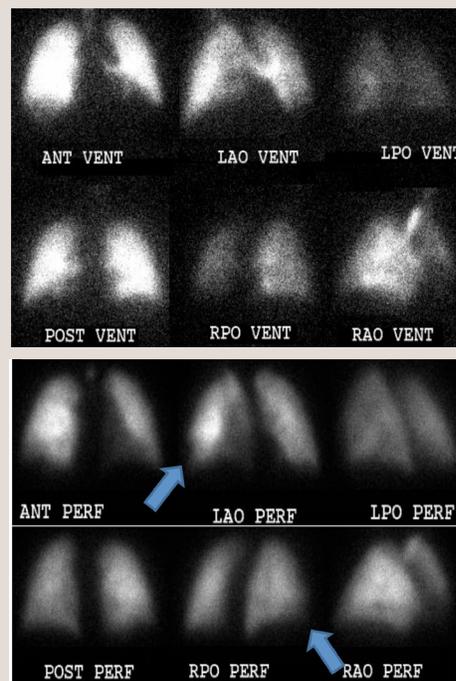


Yang Lu
Nuclear Medicine Service,
Department of Radiology,
Memorial Sloan-Kettering
Cancer Center

A 51-year-old male with renal cell carcinoma, renal insufficiency and a remote pulmonary embolism (PE) was referred for a V/Q scan due to dyspnea and chest pain one day following left partial nephrectomy. Planar V/Q scan was revealed an intermediate probability for PE (First row, mismatched defect shown as arrows).

As the pretest probability for PE was high, perfusion SPECT/CT was obtained, which clearly demonstrated a large segmental perfusion defect in right middle lobe on a background of clear lung parenchyma (Second row, perfusion SPECT/CT in axial, coronal and sagittal planes, defect shown as cross), consistent with the presence of PE.

This case suggests that perfusion SPECT fused with simultaneous CT may be able to replace ventilation scintigraphy altogether, through the anatomic information provided by CT.



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formed panel discussions and organizations involving radiology and nuclear medicine are ongoing at this time to discuss and deal with the issue of nuclear medicine job opportunities dwindling over the last few years, and what the answers to the situation might be. It was stated that the number one priority and commitment of the SNM was to have residents acquire employment after graduation and that a job task force was organized and was looking at what immediate short term practical actions could be undertaken to assist residents in employment. The leadership present also expressed that there is ongoing communication amongst the ACNM, SNM, ACR, and ABNM regarding the decline of nuclear medicine job opportunities.

2. Radiology and Nuclear Medicine residency pathways are now being redesigned and reevaluated. Currently the issues of nuclear medicine borders and radiology borders are being discussed and evaluated. There are changes ahead in the near future regarding the training of radiology and nuclear medicine residents, which may positively impact the job opportunities in the future.

This first of its kind resident luncheon was a beginning step in getting leadership and residents together in one room to meet each other and discuss openly the issues facing the nuclear medicine resident/physician and the newly developing obstacles in the resident's career pathway. When the meeting was adjourned, many residents attending who were not already members, enrolled in the free membership to the ACNM/NMRO. The residents as well as involved leadership expressed the desire for future meetings of this kind. The ACNM/NMRO is now dedicated to providing meetings like this in the future, with a resident networking luncheon planned for the midwinter conference in Palm Springs, as well as another meeting in San Antonio next June at the annual conference. The goal is for the organization leadership to give updates on their communication and discussion of the issues that were expressed at the Salt Lake City luncheon, in order to provide an active, open forum between leadership and nuclear medicine residents.