QIBA SPECT Task Force
Friday, February 6, 2014, 9 AM (CT)
Agenda and Additional References

RSNA

In attendance:

Richard Wahl, MD (Moderator)	Michael King, PhD, DABR	Eric Perlman, MD	Fiona Miller
Hubert Beaumont, PhD	Gregory Klein, PhD	John Seibyl, MD, CEO	Joe Koudelik
Ronald Boellaard, PhD	Richard Laforest, PhD	Daniel Sullivan, MD	Julie Lisiecki
Orest Boyko, MD, PhD	Adriaan Lammertsma, PhD	John Sunderland, PhD	
Janice Campbell, PhD	Michael Lassman, PhD	Zsolt Szabo, MD, PhD	
Ming-Kai Chen, MD, PhD	William C. (Rusty) Lavely, MD, CMO	Pierre Tervé, MS	
Yuni Dewaraja, PhD	Michael Ljungberg, PhD	Huseyin Toré, MD	
Edward A. Eikman, MD	Lawrence (Larry) MacDonald, PhD	Irene Torres, PhD	
Eric Frey, PhD	Robert Miyaoka, PhD	Benjamin Tsui, PhD	
Howard Higley, PhD	Aaron Nelson, MD	Timothy Turkington, PhD	
John Hoffman, MD	Nancy Obuchowski, PhD	Jeffrey Yap, PhD	
Brian Hutton, PhD	Amy Perkins, PhD	Brian Zimmerman, PhD	
Paul Kinahan, PhD, FIEEE			

Moderator: Dr. Richard Wahl

Quantitative SPECT Biomarker Exploratory Discussion

1.	Introduction to QIBA efforts	Drs. Sullivan, Kinahan, Wahl
2.	Example of Profile, FDG PET	Drs. Perlman, Wahl
3.	Exploratory Call on SPECT: Review of 10-10/14 call	Dr. Wahl
4.	Review of commercial SPECT products	Dr. Wahl, industry representatives (Siemens / GE / Hermes)
5.	Review of recent documents on Q SPECT/brain: *EANM, DAT Scan*, etc.	Drs. Seibyl, Cole
6.	Review of recent documents on QSPECT/body/dosimetry: *JNM/ MIRD*	Dr. Dewaraja
7.	Possible "claims"	Group
	a) Measurement of a large organ ABSOLUTE radioactivity concentration (e.g., liver): • Quantitative uptake of radiotracer, such as TcMAA for dosimetry to liver or tumor/organ dosimetry • (*Dr. Frey or Dr. Dewaraja*?)	
	b) Measurement of relative or ABSOLUTE radioactivity concentration, or ratios in a small structure: e.g., Striatum for DAT scan (*Dr. Seibyl?*) c) Thyroid or thyroid cancer (*Dr. Lassmann?*)	
	d) Other claims: clinical or research?	
	e) Do we need a claim? • i.e., Amyloid claims are still evolving for the Amyloid PET Biomarker Committee	
8.	Is there interest in forming a task force (writing group)?	
9.	Who is willing to join an unpaid, overworked, coalition of the willing to take on this task?	
10.	*Next steps?* • Monthly calls • Literature review	

Recommended References:

- Links to documents for SPECT in general and I-131:
- Dr. Dewaraja is currently working on the Lu-177 document with EANM colleagues.
    - http://jnm.snmjournals.org/content/53/8/1310.long
    - http://jnm.snmjournals.org/content/54/12/2182.long

Citations:

- Zeintl, et al. **Quantitative Accuracy of Clinical ^{99m}Tc SPECT/ CT Using Ordered-Subset Expectation Maximization with 3-Dimensional Resolution Recovery, Attenuation, and Scatter Correction**. *J Nucl Med 2010*; 51:921–928, DOI: 10.2967/jnumed.109.071571.

- Bailey DL and Willowson KP. **Quantitative SPECT: Its Time has Come: An Evidence-Based Review of Quantitative SPECT Imaging and Potential Clinical Applications.** *J Nucl Med 2013*; 54:83–89; DOI: 10.2967/jnumed.112.111476.

- Willowson KP, Bailey DL, and Baldock C. **Quantitative SPECT Reconstruction Using CT-derived Corrections.** *Phys. Med. Biol.* **53** (2008) 3099–3112; doi:10.1088/0031-9155/53/12/002

Doodle Poll Follow Up: Those on today's call will be polled to respond if they would like to join this QIBA SPECT Task Force and participate on regular calls.

Upcoming Nuclear Medicine Calls (Fridays, 9 am CT):

- **February 13**: PET **Amyloid** Biomarker Ctte
- **February 20**: **SPECT** Task Force
- **February 27**: PET **Amyloid** Biomarker Ctte