

SUPPLEMENTARY MATERIAL

Questionnaire: International survey on PET/MRI applications

1. In which area/region is your center located?
 - a) Western Europe
 - b) Asia
 - c) North America
 - d) Australia
 - e) Eastern Europe

2. Since when do you operate a combined PET/MRI?
DD/MM/YYYY

3. Please name the vendor of your PET/MRI?
 - a) Siemens
 - b) GE
 - c) Philips

4. Describe the site of the PET/MRI installation.
 - a) Public – academic
 - b) Private – academic
 - c) Public – non-academic
 - d) Private – non-academic

5. How was the PET/MRI system funded?
 - a) Research funds/Grants
 - b) Government funding
 - c) Hospital funding
 - d) Private funding/donation

6. Which department is the PET/MRI installed at?
 - a) Nuclear Medicine
 - b) Radiology
 - c) Joint Nuc/Rad
 - d) Other (specify)

7. Who is the main operator of the PET/MRI?
 - a) Nuclear Medicine
 - b) Radiology
 - c) Joint Nuc/Rad
 - d) Other (specify)

8. How many MDs, techs, physicists, staff are engaged in routine operations?
 - a) MDs? (0-99)
 - b) Technicians? (0-99)
 - c) Physicists? (0-99)
 - d) Staff? (0-99)

9. Who reports the PET/MRI?
 - a) Nuclear Medicine expert

- b) Radiologist
 - c) Joint Nuc/Rad
 - d) Other (specify)
10. What fraction (%) of the PET/MRI is used clinically or for research?
- a) Clinical (0-100)
 - b) Research (0-100)
11. Please name the most prevalent research application
- a) Oncology
 - b) Other
 - c) Neurology
 - d) Cardiology
12. How many patients have been scanned on the PET/MRI since it was installed?
(0-9999)
13. What is your average weekly throughput of PET/MRI patients?
(0-999)
14. In addition to PET/MRI, do you run MR-only scans on separate patients using the PET/MRI?
- a) Yes / Fraction (%) of all patients on PET/MRI?
 - b) No
15. What fraction (%) of clinical PET/MRI patients is scheduled for neuro, cardio, onco, other scans?
- a) Neurology (0-100)
 - b) Cardiology (0-100)
 - c) Oncology (0-100)
 - d) Other (0-100)
16. Please list your PET/MRI study types/ indication ranked by frequency from the following selection (top 5):
- a) Cancer - Musculoskeletal
 - b) Cancer - Respiratory system
 - c) Cancer - Gastrointestinal
 - d) Cancer - Brain tumor
 - e) Cancer - Prostate Cancer
 - f) Cancer - Primary and secondary liver
 - g) Cancer - Pancreatic
 - h) Cancer - Head/neck
 - i) Cancer - Gynecologic
 - j) Cancer - Hematological
 - k) Neurodegenerative diseases
 - l) Cardiovascular disease
 - m) Orthopedics
 - n) Inflammation
 - o) Other
17. What is a typical neuro protocol and how long does it take?
- a) Time (0-999 minutes)

- b) Protocol? Free Field
18. What is a typical cardio protocol and how long does it take?
- a) Time (0-999 minutes)
 - b) Protocol? Free Field
19. What is a typical onco protocol and how long does it take?
- a) Time (0-999 minutes)
 - b) Protocol? Free Field
20. What is a typical "other" protocol and how long does it take?
- a) Time (0-999 minutes)
 - b) Protocol? Free Field
21. Please rate the three most popular tracers used for PET/MRI in neuro, cardio, onco, other?
- a) Neurology: FDG/FET/FDOPA/MET/PIB or Amyloid/Other
 - b) Cardiology: FDG/NH3/H2O/Rb/Other
 - c) Oncology: FDG/DOA/DOPA/PSMA/Choline/Other
 - d) Other: FDG/Other
22. If you would not have access to a PET/MRI what kind of imaging test would the majority of patients undergo instead?
- a) PET/CT
 - b) MRI and PET/CT
 - c) Other
23. What would you say is the key application of PET/MRI?
- Free Field
24. What runner-up applications do you see in the next 3 years?
- Free Field
25. Will PET/MRI excel in clinical routine over the next 1, 3, 5, 10 years?
- a) 1 year: yes / no
 - b) 3 years: yes / no
 - c) 5 years: yes / no
 - d) 10 years: yes / no
26. What will drive clinical adoption of PET/MRI?
- a) Cost
 - b) Unique clinical information
 - c) Patient throughput
 - d) Diagnostic superiority over PET/CT
 - e) Functional MRI capability combined with molecular PET information

Supplemental Table 1: Uncensored free text response for MRI protocols (Questions 18-20).

Cardiology

- 1 4 Chamber Cine, LVOT Cine, SA Cine, Pre Con Moll, T2 3 pt 3 recovery, TFI single shot 10 s, FLASH, T1 sat, TFL T1 Sag, T1 VIBE COR

Neurology

- 1 PET/MRI BRAIN WITH UTE AC, AXIAL T1, T2, FLAIR, DWI, SWI
- 2 T2 tra, T1 GRE 3D sag, DWI tra, FLAIR tra, T1 GRE 3D sag with contrast media
- 3 MPRAGE, PRE+POST, T1 COR, FLAIR, SWI, DWI
- 4 T2 TIRM tra, T2 TSE tra, Diff, T1 fl2d tra, sag, T1 SPC sag iso, T2 SPC sag iso
- 5 Sag T1, Ax T2, Ax FLAIR, AX DWI, Cor T2
- 6 Loc, AC, T2 FLAIR tra, T1 FLASH tra, T2 TSE tra/cor, SWI tra, T1 MPRAGE
- 7 t1-t2-flair-dwi

Oncology

- 1 PET/MRI WITH DIXON AC, AXIAL T1 VIBE DIXON, T2 HASTE, CORONAL STIR
 - 2 Dixon with and without contrast, DWI
 - 3 T2 HASTE, T1 VIBE
 - 4 DCE MRI
 - 5 DIXON for AC, T2-HASTE tra, T2-TIRM cor, Diff tra b 50-400-800, T2-VIBE without and with Gadolinium
 - 6 dixon-dwi-haste
 - 7 WB dixon, t2, DWI + locals
 - 8 Basic whole body or advanced with dedicated MR in specific body areas
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