March 12, 2009

RE: PET Scan Request

To Whom It May Concern:

This is to provide background medical information to support the use of PET imaging for patients with plasma cell disorders.

The following summarizes the main points:

- **Plasma cell malignancy** (including myeloma) are PET AVID.\(^1\)\(^-\)\(^3\) This is well documented.

- **Role in staging or re-staging assessment**
  - PET is the most reliable method to detect unknown sites of disease when evaluated in comparison with MRI and/or CT alone.\(^4\)\(^,\)\(^5\)

- **Impact on intended management**
  - Myeloma has the highest impact factor for use of PET in any malignancy related to change in clinical management based upon scan results. Decisions are changed 48.7% of the time.\(^6\)

- **Cost effectiveness**
  - Compared to other imaging techniques, the use of PET is extraordinarily more cost effective since multiple areas of imaging are required to encompass the scope of possible sites of active disease.
  - The comparative costs are:
    - Wide-field CT imaging or MRI costs ~$17,000 to encompass all major bone sites
    - PET imaging with targeted CT costs ~$3,000*  
      - Approximate depending upon exact details. CT cost could become higher depending on findings.

There is thus a basis for requesting PET imaging based upon:

- Fundamental science- PET AVID
- Clinical setting- MOST USEFUL TECHNIQUE
- Impact on management- HIGHEST IMPACT FACTOR
- Cost- ALTERNATIVES ARE OVER 5 TIMES MORE EXPENSIVE

If you need additional details, please let me know.

Yours sincerely,

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REFERENCES


ADDITIONAL REFERENCES:

7. Schirimsteiner H, Buck AK, Bergmann L, Reske SN, Bommer M. Positron emission tomography (PET) for staging of solitary plasmacytoma. Cancer Biother Radiopharm 2003; 18: 841-845


PET/CT with other imaging modalities in myeloma. Skeletal Radiol 2006; 35: 632-640

13. Even-Sapir E, Mishani E, Flusser G, Metser U. 18F-Fluoride positron emission tomography and 