Shields Imaging of Eastern Massachusetts, LLC
SIEM-25121212-RE

APPLICANT QUESTIONS 1

Responses should be sent to DoN staff at DPH.DON@mass.gov

While you may submit each answer as available, please

- List question number and question for each answer you provide
- Submit responses as a separate word document, using the above application title and number as a running header and page numbers in the footer
- We accept answers on a rolling basis however, when providing the answer to the final question, submit all questions and answers in order in one final document.
- Submit responses in WORD or EXCEL; only use PDF's if absolutely necessary. **Whenever possible, include a table in data format (NOT pdf or picture) with the response.**

In order for us to review this project in a timely manner, please provide the responses by **January 30, 2026**.

1. The Race and Ethnicity demographics were dominated by the "Not collected/ Declined." Please describe how the Applicant plans to improve race and ethnicity data collection moving forward.

   The Applicant understands the value that patient demographics has in advancing health equity. As part of the Applicant's online registration process, patients are required to provide information indicating their race and ethnicity. If a patient registers by phone, our Patient Care Representatives (PCR) seek this information from patients during the scheduling intake process. If a patient does not respond to this query with the PCR, the patient is asked this question again, when they arrive at the center for their exam. The Applicant will continue to highlight the importance that this data plays in ensuring health equity during staff training.

2. To what does the Applicant attribute the increase in scan volume from FY22-FY25 (as depicted in Historical Scan Volume Table in the Narrative, page 5)?

   The Applicant attributes the increase in scan volume from FY22-FY25 in part to changes in care/treatment standards reflecting the demonstrated value of PET/CT in detecting and monitoring various diseases, especially cancer, and PET/CT's growing applications in non-oncologic conditions, leading to improved diagnosis and treatment strategies.

   Studies show that PET/CT is one of the most common and rapidly expanding medical imaging techniques used in oncology. Moreover, PET/CT has proven to be cost-effective, and it is expected that its clinical uses will continue to expand with the increased use of new tracers. https://pmc.ncbi.nlm.nih.gov/articles/PMC4952129/

   Furthermore, PET/CT has diversified beyond fludeoxyglucose-18 (FDG) tumor imaging to include prostate PET with PSMA, neuroendocrine tumor imaging with Dotatate tracer, and brain imaging with amyloid tracers. Studies also show that PET/CT has become a valuable tool in cardiac applications. Specifically, FDG PET/CT imaging has become a standard for myocardial viability assessment and also holds the potential for simultaneous assessment of left ventricular

function. In patients with cardiac sarcoidosis, FDG PET-CT and Cardiovascular MRI may complement each other by providing valuable information related to disease extent and treatment response. https://pmc.ncbi.nlm.nih.gov/articles/PMC4449487/

Partly as a result of the above, it is estimated PET/CT procedure volumes grew by 12.2% in 2024. https://www.prnewswire.com/news-releases/demand-for-pet-imaging-surges-12-2-in-2024--straining-capacity-at-us-facilities-imv-report-finds-302479182.html

PET/CT as a modality is expected to continue to grow rapidly. In a report published by Allied Medical Research (ALR), it was found that the utilization of PET/CT scanner devices is likely to increase significantly with an increase in diagnoses of chronic diseases. Healthcare providers are increasing (and seeking to increase) their utilization of PET/CT devices in order to avail themselves of the numerous existing and anticipated benefits offered by these devices to diagnose and treat clinical disorders, coupled with the evolving indications for PET/CT technology.

ALR sites factors such as the rise in number of chronic disease patients as the mean age of the global population shifts upward to the growth of diagnostic PET-CT systems. Additionally, increases in demand for PET/CT imaging and innovations in PET technology—fueled by the increase in the prevalence of diseases such as cancer that it can detect—have boosted the demand for PET/CT services, both globally and locally. The COVID-19 pandemic also impacted demand for PET/CT imaging because of its ability to help monitor infection at the molecular level. https://www.alliedmarketresearch.com/pet-ct-scanner-device-market

3. Please define the years (2026, or FY2026, etc.) for the Forecasted Scan Volume Table on page 6 of the Narrative.

The Applicant defines its fiscal year as January to December; therefore, Fiscal Year and Calendar Year cover the same months and are identical as defined by the Applicant. Following is an updated table with the column titles updated to reflect FY/CY, consistent with the CPA report.

Forecasted Volume	**2026**	**2027**	**2028**	**2029**	**2030**
FDG PET/CT	2,579	2,837	3,121	3,433	3,690
PSMA PET/CT	684	752	827	910	978
Amyloid PET/CT	186	204	225	247	266
Cardiac PET/CT	100	110	121	134	144
PET/CT Scans	**3,549**	**3,903**	**4,294**	**4,724**	**5,078**

4. Please provide details on:
    a. The methodology used to project the Forecasted Scan Volume table of page 6 of the Narrative and;

The Applicant used proprietary forecasting tools available through its Healthcare Advisory Board membership which forecasted 9% PET/CT growth per year for the next 5 years in the Applicant's market. The Advisory Board forecasting tool incorporates assumptions for PET/CT market trends related to population changes including aging, shifts in site of care from HOPDs to free standing facilities, and changes in treatment, screening guidelines and coverage for diagnoses that have PET/CT use indications for staging of diseases. The Applicant assumed 10% annual growth in years 2026-2029 given the increase in days of service and reduced the annual increase to 7.5% for 2030.

b. How the Applicant determined that a 7 days/ week availability would be the appropriate number of days to serve the need.

The Applicant determined that a full week of service was appropriate based on the expectation that it will be performing 15 scans per day, 7 days a week over 52 weeks per year.

5. Please provide details on the number of FTE's by specialty that will be needed to staff the Proposed Project once operational.

To support the expansion of the PET/CT program by an additional five days, the Applicant will staff the proposed project with 4 FTE Technologists and 1.5 FTE Tech Aids.

6. Please provide the Applicant's plan to attract staff talent for the additional FTE's.

To support the expansion of the PET/CT program by an additional five full operational days, the Applicant has developed a comprehensive and multi-channel talent acquisition strategy to ensure timely hiring of qualified full-time staff.

Recruitment efforts leverage national and regional sourcing platforms, including Indeed and LinkedIn, to maximize visibility among experienced imaging professionals. To remain highly competitive in the current healthcare labor market, the Applicant offers robust sign-on incentives.

In addition to local recruitment, the Applicant has expanded our geographic reach to include all of New England, significantly increasing the candidate pipeline. For candidates relocating to the region, we actively assist with identifying suitable housing to reduce relocation barriers and improve acceptance rates.

7. Please provide an analysis (with references cited) for the reasons the increase 65+ population would result in an increase of PET/CT scan volume.

According to studies, PET/CT is one of the most common and rapidly expanding medical imaging techniques used in oncology. It has proven to be cost-effective, and its clinical use will continue to grow with the increased use of new tracers. Additionally, PET/CT is performed as a

routine investigation tool in a number of common cancers such as lung cancer, Lymphoma, head and neck cancer, breast cancer, gastrointestinal tract cancer, melanoma, and esophageal, colorectal, pancreatic, gynecological, urinary tract, prostate, and testicular cancer. https://pmc.ncbi.nlm.nih.gov/articles/PMC4952129/

The National Cancer Institute states that advancing age is the most important risk factor for cancer overall and for many individual cancer types. The incidence rates for cancer overall climb steadily as age increases, from fewer than 26 cases per 100,000 people in age groups under age 20, to about 350 per 100,000 people among those aged 45–49, to more than 1,000 per 100,000 people in age groups 60 years and older. https://www.cancer.gov/about-cancer/causes-prevention/risk/age

Furthermore, studies show that PET/CT has become a valuable tool in cardiac applications. Specifically, FDG PET-CT imaging has become a standard for myocardial viability assessment. https://pmc.ncbi.nlm.nih.gov/articles/PMC4449487/ Studies show that aging and elderly populations are particularly susceptible to cardiovascular disease with age being an independent risk factor for cardiovascular disease. https://pmc.ncbi.nlm.nih.gov/articles/PMC6616540/

8. What other PET/CT service options are in the geographic area for the SIEM Patient Panel?

   The following 2 locations provide PET/CT in the Applicant's PSA (10-mile radius).

   - Boston Medical Center South (formerly Good Samaritan) – Brockton, MA
   - Signature Healthcare (Shields location) – Brockton, MA

9. Please compare the average wait times at SIEM to the average wait times at other Shields PET/CT facilities operating at only 2 days per week.

LOCATION	WAIT TIME
PET/CT Services by Tufts Medical Center	14.8 days
Shields PET-CT at Berkshire Medical Center	15.7 days
Shields Signature Brockton	13*
Shields Imaging of Eastern MA	17 days

*measured from July to present after operationalizing a second day of service.

10. Please provide the industry recommended interval between date of referral to date of scan (with reference cited).

    There are no industry standard/national benchmarks related to optimal wait times for PET/CT services, however, roughly 40% of imaging sites report wait times of over eight days or more for non-emergency PET/CT scans with average turnaround times more than doubling since 2019.

https://www.prnewswire.com/news-releases/demand-for-pet-imaging-surges-12-2-in-2024--straining-capacity-at-us-facilities-imv-report-finds-302479182.html

Studies show that even a four-week delay of cancer treatment is associated with increased mortality across surgical, systemic treatment, and radiotherapy indications for seven cancers. Policies focused on minimizing system level delays to cancer treatment initiation could improve population level survival outcomes. https://www.bmj.com/content/371/bmj.m4087

11. Provide details on barriers to care currently faced by the Patient Panel that would support the implication that additional access to PET/CT services would assist with health equity.

    The Applicant currently only operates Tuesdays and Thursdays, from 6:30AM to 10:00PM. With a limited service such as this, patients experience longer wait times to access PET/CT services, or they have to travel further to access alternative PET/CT services, thereby further burdening the schedules at other PET/CT sites. Studies show that even a four-week delay of cancer treatment is associated with increased mortality across surgical, systemic treatment, and radiotherapy indications for seven cancers. Policies focused on minimizing system level delays to cancer treatment initiation could improve population level survival outcomes. https://www.bmj.com/content/371/bmj.m4087

    Furthermore, weekend service days offer more flexibility to patients and do not require patients or caregivers to take time off work to access services.

12. Do any non-South Shore Health system patients use the services at SIEM?
    a. If so, how are imaging results provided to outside providers?

    The Applicant's patient panel is comprised of predominantly South Shore Health System patients. A relatively small percentage of patients that use this service are non-South Shore Health System patients. Images are provided to these patients and their physicians via a picture archiving system (PACS). This system electronically stores images and reports which are accessed via an online portal and can be saved into the patients' medical record.

13. Please provide an explanation of any research demonstrating the cost effectiveness of mobile PET/CT services and/or the effect of timely access to PET/CT on total medical expenses.

    Studies show that the cost of mobile imaging compared to fixed imaging is relatively equivalent, with the exception that mobile imaging services shared between several hospitals is shown to be the most cost effective approach. https://pmc.ncbi.nlm.nih.gov/articles/PMC7145907/#:~:text=Twenty%20two%20articles%20were%20included,the%20most%20cost%2Deffective%20approach.

    Timely access to treatment, however, plays a critical role in cancer diagnosis and treatment. Delays in cancer diagnosis can result in a higher mortality rate and disease burden as well as a

lower cure rate for cancer patients. https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1442764/full

Delays in medical care represent a significant public health challenge with substantial impacts on morbidity, mortality, and healthcare costs. https://saspublishers.com/article/22381/

14. Please provide a table comparing the cost of PET/CT services at SIEM versus the hospital setting.

    The national average cost for a PET/CT procedure at inpatient facilities is $7,275, while the same procedure at outpatient facilities averaged $2,550. The major difference in the cost between the two types of facilities is the additional fees added to the patient's bill at the hospital.

    At hospitals, the patient may receive not only the bill for his/her study, but also a bill for the radiologist to interpret the study. Also, hospitals may be allowed to charge Medicare and most other commercial insurers a facility fee. https://www.newchoicehealth.com/pet-scan/cost

15. The Narrative states that the Applicant "plans to implement" patient access tools and "will provide" connection to programs to address issues associated with SDOH. Given that SIEM is already an established mobile PET/CT site, does this mean that these tools and connections are not currently in place for the Patient Panel?

    The Applicant currently provides and will continue to provide these tools and supports to patients.

16. Please describe the Applicant's SDoH Screening process including:
    a. How are SDoH assessed?
       The Applicant screens for SDoH at each touchpoint with the patient. This includes a rigorous screening process during pre-registration as well as at the time of the appointment.
    b. At what frequency?
       Every interaction with the patient. For example, patients are screened both online and with a Patient Care Representative during the scheduling intake process. The patient is reassessed at the time of the appointment with the Technologist performing the scan. This process is repeated every time a patient receives a PET/CT scan.
    c. How does a linkage happen (assigned a social worker, an automatic reply email, etc.?)
       Linkages occur during pre-registration screening and alerts. During pre-registration, the staff documents key patient needs and creates alerts in the patient's record to communicate those needs across departments. Pre-registration is completed through Concierge (Patient Connect), which allows patients to complete pre-registration via a secure link sent to their mobile phone or email.

Alerts generated during this process may be created automatically based on the patient's responses within Patient Connect or manually by the PET/CT representative team when additional follow-up or clarification is required. Alerts are assigned at either the patient level or the order level, depending on their purpose. They range from clinical and operational needs—such as language interpreter requirements or the presence of a pacemaker—to administrative confirmations, including verification that the patient has been confirmed. All alerts are assigned to the patient's chart to ensure visibility, continuity, and coordination of care across departments.

17. Please propose an Outcome Measure for wait times (time between date of referral to date of scan).

Timeliness to Care. Ensuring timely access to patient care improves patient outcomes. Accordingly, the Applicant will track patient wait times for care.

Measure. Wait times are measured as a function of "orders to schedule" and evaluated twice weekly with respect to next available appointment and site backlogs.

Projections: Baseline: 17 days, Year 1: 13 days, Year 2: 10 days, Year 3

Monitoring: Wait times will be measured quarterly to evaluate timely access to care.