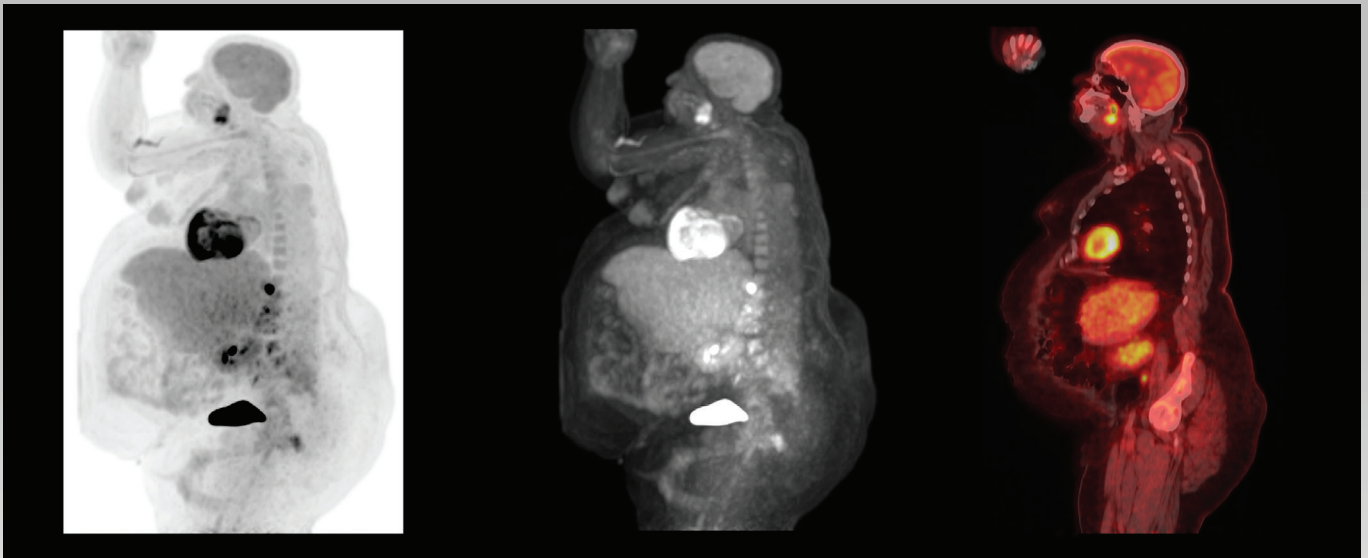


## PET/CT Clinical Case Study Neck Cancer Follow-Up

**Obese Patient BMI 58.2**



### HISTORY

55-year-old male with a BMI of 58.2 with a history of squamous-cell carcinoma in the left side of the neck. A PET/CT scan was requested for follow-up.

### SCAN

At the day of the CT scan, the patient was in severe pain and unable to lay down on his back or maintain the supine position during the exam. Taking advantage

of the Celesteion™ PET/CT 90 cm large bore, the technologist positioned the patient on his most comfortable position, lateral right side.


### DIAGNOSIS

MIP (Maximum Intensity Projection), Inverted MIP and Fused PET-CT images demonstrate primary left tonsillar malignancy with metastatic lymphadenoma to the post submandibular gland.

#### PET Parameters

| Region Covered     | Injected Dose                   | Acquisition Time | Number of Beds | Uptake Time | Glucose Level | Reconstruction |
|--------------------|---------------------------------|------------------|----------------|-------------|---------------|----------------|
| Skull to mid-thigh | 11.6 mCi of <sup>18</sup> F-FDG | 3.5 min/bed      | 8              | 60 min      | 145           | TOF Listmode   |

#### CT Parameters

| Scan Mode | Collimation | kVp | mAs           | HP | Rotation Time | Scan Range | Dose Reduction  | CTDIvol  | DLP           |
|-----------|-------------|-----|---------------|----|---------------|------------|---|----------|---------------|
| Helical   | 1.0 mm x 16 | 135 | SUREExposure™ | 15 | 1.0 s         | 980 mm     | <br>(Adaptive Iterative Dose Reconstruction) | 24.0 mGy | 2676.9 mGy·cm |



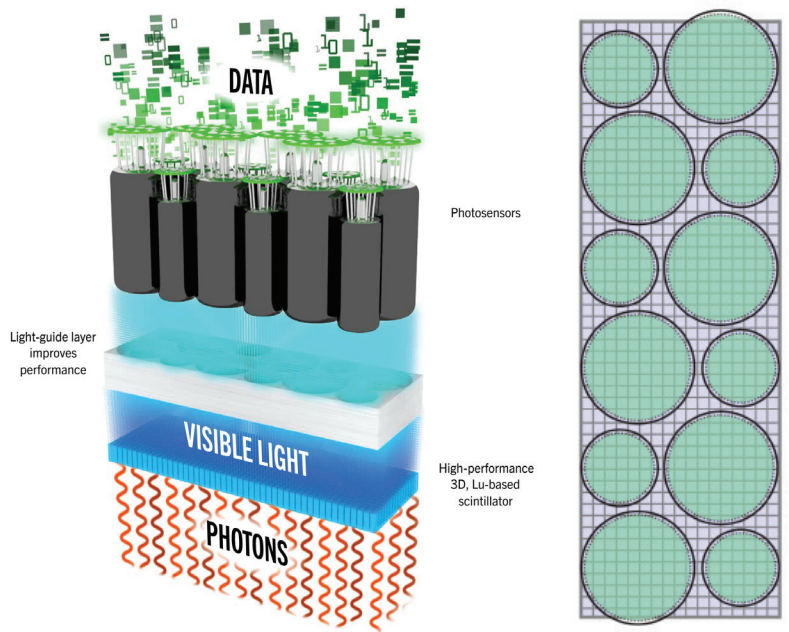
## TECHNOLOGY

### Bore Size and FOV

With the industry's largest bore of 90 cm (CT) and 88 cm (PET), a true scan field of view at 70 cm (CT and PET) and Time-of Flight technology, Celesteion was designed to overcome real life challenges providing an optimal patient experience, better access for oncology planning and therapy positioning devices, enabling facilities to improve care and maximize their investment.

### PET Detector

Canon Medical Systems' Celesteion PET/CT uses Lutetium-based 4x4 mm scintillator crystals to ensure high spatial resolution of the images. A novel modular and scalable detector design results in best-in-class timing resolution, optimizes clinical and operational performance while improving overall accuracy, lowering dose and/or shortening scan time for a wider range of clinical applications and patients.



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