82 year old male with history of mucoepidermoid carcinoma of the parotid gland

Jeffrey Guzelian MD

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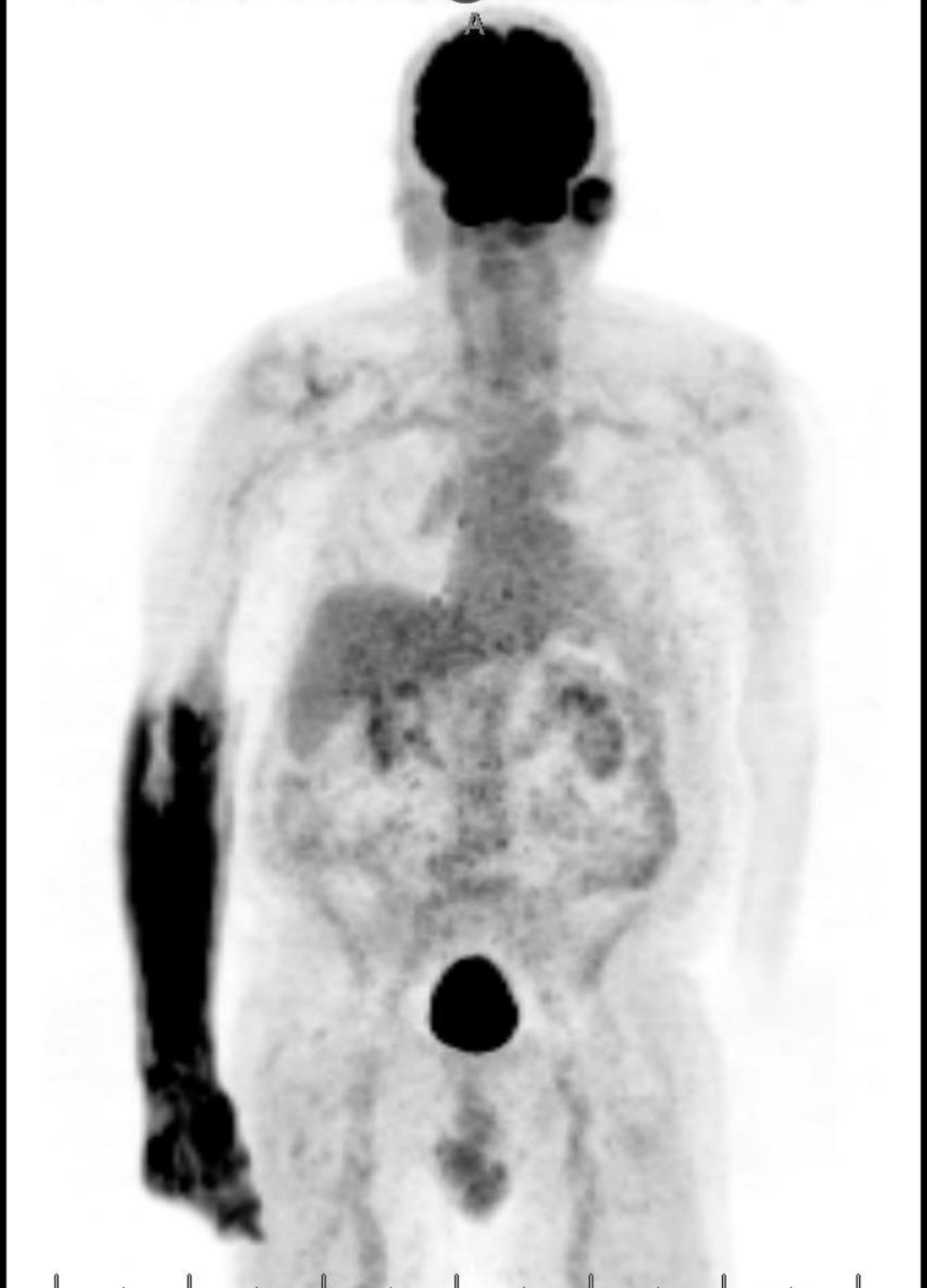

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Arterial injection of FDG on PET/CT

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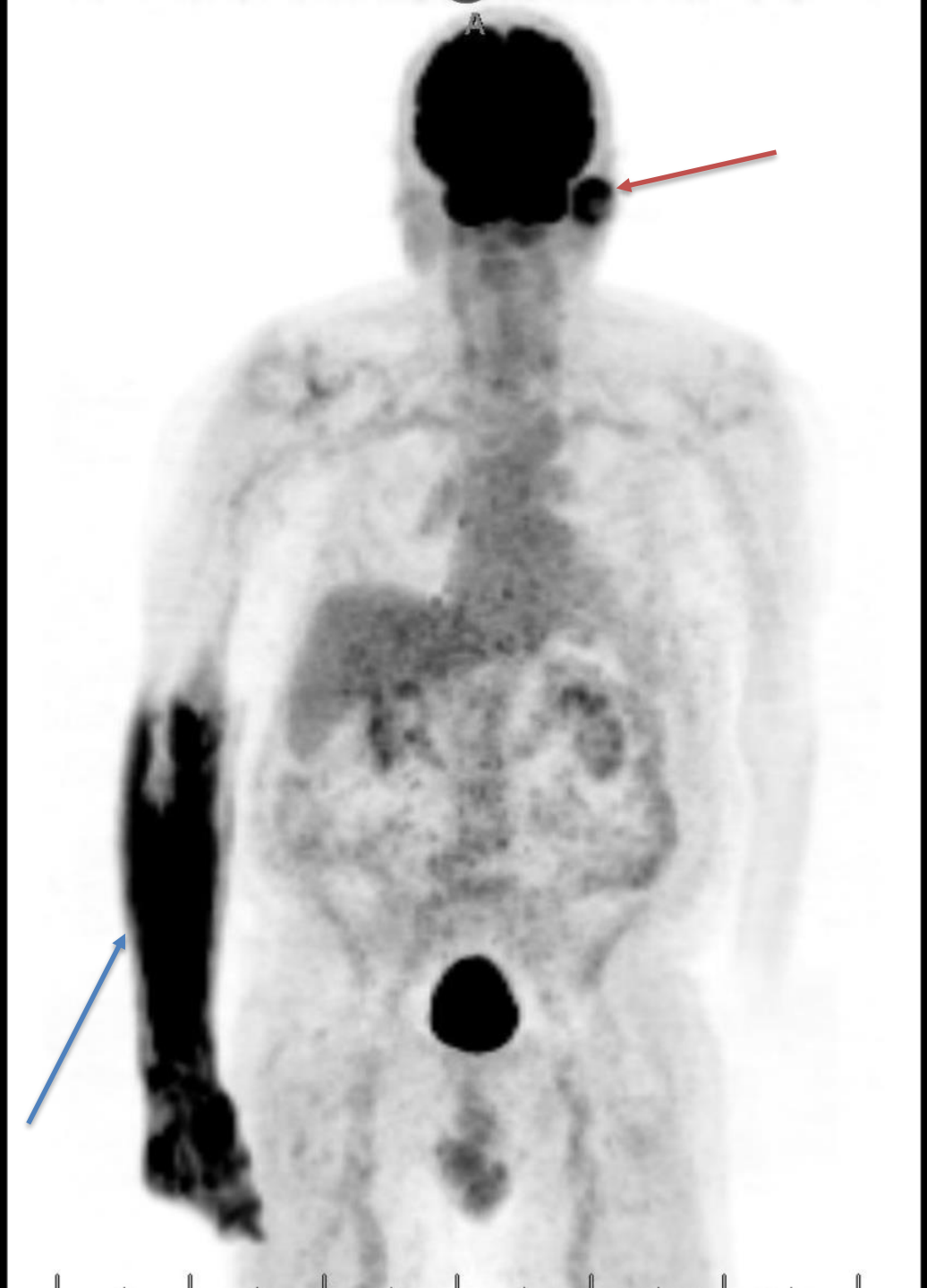
FDG-PET 3D MIP demonstrates diffuse increased FDG activity within the right forearm and hand soft tissues. This suggests radiotracer injection and accumulation in the right upper extremity arterial system distal to the injection site, producing the “hot glove” sign (blue arrow)

Some amount of radiotracer passes through the capillary system and perfuses the remaining body tissues, resulting in effectively normal biodistribution of radiotracer without significant effect on SUV quantification. Increased activity is noted in the left parotid malignancy (red arrow)



Arterial injection of radiotracer

- Inadvertent injection of radiotracer into an upper extremity artery
- The radiotracer accumulates within the arterial system and soft tissue *distal to the injection site*, producing the “hot glove” sign
- This is most commonly seen with FDG-PET and whole body bone scan
- A significant amount of the radiotracer is usually able to perfuse the remainder of the body and produce an otherwise diagnostic study
- Given the relatively short half-life of FDG (110 min), there is no significantly increased long term effect of the relatively concentrated radiotracer bolus on the upper extremity
- Differential diagnosis for increased radiotracer activity within the upper extremity on PET/CT or bone scan include: radiotracer infiltration into soft tissue, thermal/electrical injury, or diffusely infiltrating soft tissue tumor

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