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NCCN Guideline Panel on Anal Cancer
Via Electronic Submission

Dear Distinguished Panel Members:

On behalf of the Medical Imaging & Technology Alliance, we respectfully request that the NCCN Panel on Anal Cancer review the enclosed data for inclusion of Positron Emission Tomography/Computed Tomography (PET/CT) in the evaluation of anal carcinoma.

In addition to current NCCN guidelines, we request that the PET/CT be a recommended imaging test for the **initial staging of anal cancer patients**, and for the **assessment of response to chemoradiation**, especially if salvage surgery is considered.

For staging in anal cancer, digital rectal examination, CT scan and/or MRI of pelvis and anoscopy are recommended. PET/CT scan has an emerging role and has the potential to reveal more information on tumor extent, nodal involvement and distal metastases. Bhuva et al in 88 patients with anal cancer, the PET/CT differed from the baseline MRI in 18 patients, altering the stage in 42% of patients (1) The PET/CT showed greater sensitivity for detection of lymph nodes with a trend toward upstaging anal cancer. Mistrangelo et al in 53 consecutive patients with anal cancer demonstrated that PET/CT upstaged 37.3% and downstaged 25% of patients, detecting the primary tumor more often than CT (2). Staging of perirectal, pelvic or inguinal lymph nodes was better with PET/CT. Caldarella et al in a metanalysis demonstrated that FDG-PET was a specific diagnostic tool in detecting locoregional lymph node involvement in patients with anal cancer (3). Sveistrup et al in 95 patients with anal cancer, PET/CT upstaged the disease in 14% of patients, and changed the proposed treatment plan in 17% (4). Wells et al in 50, PET/CT increased the stage in 17% of cases, decreased the stage in 19%, and did not alter stage in 65% (5). The PET/CT findings altered patient management in 29% of cases. The authors conclude that PET/CT alters the initial staging sufficiently that it should be used routinely in anal cancer.

The role of PET/CT is the evaluation of response to chemoradiation or in the follow up of anal cancer patients has not been optimally defined. Schwarz et al

evaluated post therapy PET/CT in 44 patients determining that a partial metabolic response in the anal tumor was predictive of a significantly decreased progression-free and cause specific survival after chemoradiotherapy (6). The 2 year progression free survival rate was 95% for patients with a complete versus 22% for patients with a partial metabolic response in the anal tumor ($p=0.0001$). Mistrangelo et al found that PET/CT at three months was more accurate than PET/CT at 1 month in evaluating outcomes after chemoradiation ; sensitivity was 100% versus 66.6% and specificity 97.4% versus 92.5% (3). Selected use of PET/CT may be justified if salvage surgery is planned after chemoradiation (5).

The following articles are submitted in support of this proposed change. In summary, current evidence suggests an established role of PET/CT scan for the initial staging of anal cancer patients. In addition, PET /CT scan must be strongly considered for assessment of response to chemoradiation, especially if salvage surgery is considered. Further studies are needed to evaluate whether surveillance PET/CT have a positive impact on overall survival.

Sincerely,



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