Renal Cell Carcinoma (NGS) Use Case 11.19.18

M-CODE Working Group

JS is a 68 year old black male with a history of hypertension, obesity (BMI = 31), and a 40 pack-year smoking history who presents to Dr. L, his primary care physician, with multiple episodes of intermittent painless gross hematuria, mild fatigue, and an 18 pound weight loss over the past 6 months. Other than benign prostatic hypertrophy (baseline PSA = 1.6) and 2 prior episodes of prostatitis, resolved, he has no other relevant urologic history. Pertinent negatives include no cough, shortness of breath, nausea/vomiting, pain, headaches, visual changes, or localizing neurologic symptoms. JS attributes the weight loss to a gradual decrease in appetite. Physical exam is normal except for obesity and trace wheezes at the left lung base. There is no palpable abdominal mass. In light of the hematuria, Dr. L refers him to Dr. M, a urologist, who performs an office cystoscopy which does not show any mucosal lesions. Dr. M orders a contrast-enhanced CT scan of the abdomen and pelvis. The CT shows a 9 cm hypervascular enhancing mass involving most of the left kidney, with cystic components and areas of necrosis and hemorrhage. In the liver, there are several low density lesions predominantly involving the left lobe, ranging in size from 0.5 -2.5 cm, demonstrating arterial phase hyperenhancement on CT. The visualized portions of both lung bases demonstrate multiple, rounded, well-circumscribed lung nodules without cavitation, ranging in size from < 0.5 cm to 2 cm.

Dr. M refers the patient to a medical oncologist, Dr. S. She performs a physical exam confirming the findings of Dr. L. She assesses his performance status as ECOG 1. A CBC and chemistry panel are notable for a hemoglobin of 11.2 g/dl, platelets 520K (both WNL 1 year prior), and a normal calcium and creatinine. She orders a CT scan of the thorax, demonstrating too numerous to count bilateral pulmonary nodules, similar to those seen on the abdominal CT. A percutaneous needle biopsy left renal mass is performed, which demonstrates clear cell carcinoma, WHO/ISUP grade 3, without sarcomatoid features. A CT-guided needle biopsy of a peripheral LLL lung nodule shows malignant cells with clear cell features, suggestive of a renal primary. The patient is felt to fall into the poor risk prognostic group by IMDC criteria.

The patient expresses a desire for treatment with an oral agent. Using shared decision-making, Dr. S. presents the treatment options in the NCCN Guidelines. To help rank the options, she turns to similar patient analyses, and a treatment recommendation for an oral agent is made.

Implied facets of the case: The patient has received no prior treatments for this new diagnosis of metastatic renal cell carcinoma. The disease is not oligometastatic. Performance status is adequate to undergo treatment. The patient is open to receiving standard of care as well as treatment on a clinical trial.