Supplementary Material

Organ and Marrow function requirements for inclusion:

Leukocytes ≥3,000/mcL,
Neutrophils ≥1,500/mcL,
Platelets ≥100,000/mcL,
Hemoglobin >10 g/dL,
Total bilirubin within institutional upper limit of normal (ULN),
AST/ALT ≤5 times ULN,
Creatinine ≤ULN or creatinine clearance ≥45mL/min/1.73 m^2 if creatinine >ULN,
PT-INR/PTT <1.5 times ULN*

* Patients receiving therapeutic anti-coagulation were permitted provided there was no prior PT-INR/PTT abnormality.

Table 1. Sorafenib dose modification

Toxicity	Severity	Dose Modification for Sorafenib
Diarrhea	Grade 3 or 4 and no improvement with loperamide or diphenoxylate/atropine	If radiated field includes a significant amount of small or large bowel then this is a DLT and the patient should be removed from study. If not bowel is in field then hold until resolves to grade 2 and then resume at 50% of original dose
Skin Rash	Grade 2	Hold until resolves to grade 1 and then resume at 100%
	Grade 3 or 4	Hold until resolves to grade 1 then resume at one dose reduction
Hand-Foot Syndrome	Grade 2	Hold until resolves to grade 1 and then resume at 100%
	Grade 3	Hold until resolves to grade 1 and then resume at 50% of original dose
Hypertension	Grade 2, asymptomatic	Initiate monotherapy (suggest dihydropyridine calcium-channel blocker), monitor blood pressure every two days until stabilized.
	Grade 2 symptomatic/persistent OR Diastolic BP > 100mm/Hg OR grade 3	Add agent(s): Ca++ channel blocker (if not already used), K+ channel opener, beta-blocker, thiazide diuretic)and hold Sorafenib until symptoms resolve and diastolic BP≤ 100mm/Hg. Monitor blood pressure every two days until stabilized. Resume treatment at 50% original dose.
	Grade 4	Off protocol therapy
Other toxicities	Any grade	At discretion of treating Medical and Radiation Oncologist