

Supplemental Table 1. Characteristics of Tumor Tissues

#	Specimen		% Necrosis			Truth*	Sample Site	Morphology
	ID	% Necrosis	Tumor	Type	Truth*			
1	06_0283	0	50	Metastatic	Bladder	Lymph node	Metastatic carcinoma with features of a high grade urothelial carcinoma	
2	06_0292	0	90	Metastatic	Bladder	Lung	Metastatic high-grade urothelial carcinoma involving the visceral pleura with angiolymphatic invasion	
3	06_0300	0	70	Metastatic	Bladder	Lymph node	Metastatic urothelial carcinoma with extranodal extension and blood vessel deposits	
4	06_0259	0	100	Metastatic	Breast	Ovary	Metastatic adenocarcinoma consistent with breast primary	
5	06_0269	5	100	Metastatic	Breast	Liver	Metastatic carcinoma consistent with metastasis from the breast	
6	06_0277	30	100	Metastatic	Breast	Lung	Metastatic moderately differentiated adenocarcinoma	
7	06_0321	5	95	Primary	Breast	Breast	Undifferentiated adenocarcinoma with focal mucin production	
8	06_0339	20	100	Metastatic	Breast	Liver	Moderately diff. adenocarcinoma consistent w/ metastatic ductal adenocarcinoma of breast	
9	06_0344	5	95	Metastatic	Breast	Lymph node	Metastatic carcinoma	
10	06_0260	10	100	Primary	Colorectal	Colon	Moderate to poorly differentiated adenocarcinoma extending into the subserosal fat	
11	06_0262	5	100	Primary	Colorectal	Colon	Invasive moderately to poorly differentiated adenocarcinoma of colon mucinous differentiation	
12	06_0266	30	50	Metastatic	Colorectal	Lymph node	Metastatic adenocarcinoma involving 11/24 pericolic lymph nodes	
13	06_0278	10	95	Metastatic	Colorectal	Stomach	Moderately differentiated adenocarcinoma with infiltrating gastric mucosa, muscularis propria, serosa	
14	06_0320	0	100	Metastatic	Colorectal	Omentum	Invasive, moderately differentiated adenocarcinoma	
15	06_0360	5	90	Metastatic	Colorectal	Lung	Metastatic colorectal adenocarcinoma	
16	08_1000	n/a	40	Metastatic	Gastric	Parietal peritoneum	Adenocarcinoma moderately differentiated	
17	08_1020	n/a	65	Metastatic	Gastric	Ovary	Signet ring carcinoma	
18	08_1050	n/a	35	Metastatic	Gastric	Liver	Adenocarcinoma of gastric	
19	06_0289	5	40	Metastatic	Germ cell	Lymph node	Metastatic embryonal carcinoma in 5/7 lymph nodes	
20	06_0296	20	100	Metastatic	Germ cell	Lymph node	Metastatic mixed germ cell tumor consisting of embryonal carcinoma and immature teratoma	
21	06_0301	30	70	Metastatic	Germ cell	Lymph node	Metastatic germ cell tumor consisting predominantly of embryonal carcinoma and possible yolk sac component	
22	06_0329	20	100	Metastatic	Kidney	Liver	Poorly differentiated carcinoma with clear cell and oncocytic differentiation and massive necrosis	
23	06_0333	0	90	Metastatic	Kidney	Adrenal gland	Metastatic renal cell carcinoma	
24	06_0377	30	100	Primary	Kidney	Kidney	Sarcomatoid renal cell carcinoma	
25	06_0327	0	100	Metastatic	Hepatocellular	unknown	Moderately differentiated metastatic hepatocellular carcinoma	
26	06_0351	5	100	Metastatic	Hepatocellular	Lymph node	Metastatic hepatocellular carcinoma with cellular anaplasia	
27	06_0387	5	95	Metastatic	Hepatocellular	Colorectum	Metastatic hepatocellular carcinoma w/ angiolymphatic invasion	
28	06_0258	10	100	Primary	Non-small cell lung	Lung	Invasive poorly differentiated adenosquamous cell carcinoma	
29	06_0261	10	90	Metastatic	Non-small cell lung	Lymph node	Poorly differentiated non-small cell carcinoma	
30	06_0270	5	100	Metastatic	Non-small cell lung	Adrenal gland	Metastatic moderately differentiated adenocarcinoma	
31	06_0273	0	95	Metastatic	Non-small cell lung	Adrenal gland	Poorly differentiated lung adenocarcinoma	
32	06_0274	5	100	Metastatic	Non-small cell lung	Adrenal gland	Metastatic poorly differentiated carcinoma	
33	06_0356	10	80	Primary	Non-small cell lung	Lung	Invasive pleomorphic carcinoma w/adenocarcinoma and spindle cell carcinoma	
34	06_0268	0	100	N/A	Non-Hodgkins lymphoma	Lymph node	Malignant lymphoma w/ plasmacytic differentiation and numerous large transformed cells	
35	06_0271	10	100	N/A	Non-Hodgkins lymphoma	Lymph node	Malignant neoplasm, strongly favors malignant lymphoma w/ anaplastic features	
36	06_0272	5	100	N/A	Non-Hodgkins lymphoma	Thigh mass	Malignant lymphoma, diffuse large B-cell type	
37	06_0276	0	100	N/A	Non-Hodgkins lymphoma	Thyroid	Malignant lymphoma of B-cell type w/ low and intermediate grade components	
38	06_0349	0	100	N/A	Non-Hodgkins lymphoma	Spleen	Diffuse large B-cell Lymphoma	
39	06_0459	1	100	N/A	Non-Hodgkins lymphoma	Extradural mass	Anaplastic large cell lymphoma (CD30), Alk-1 negative	
40	06_0288	20	90	Metastatic	Melanoma	Stomach	Metastatic melanoma involving full thickness of the gastric wall	
41	06_0290	5	99	Metastatic	Melanoma	Small bowel	Metastatic malignant melanoma	
42	06_0460	0	80	Metastatic	Melanoma	Lung	Metastatic melanoma	
43	06_0367	10	90	Metastatic	Ovarian	Mesentery/Sm Bowel	Poorly diff. papillary serous carcinoma most likely of ovarian origin	
44	06_0368	5	100	Primary	Ovarian	Ovary	Papillary serous adenocarcinoma involving both ovaries	
45	06_0369	20	100	Primary	Ovarian	Ovary	Papillary, high-grade, serous carcinoma of the ovary	
46	06_0264	20	100	Primary	Pancreas	Pancreas	Pancreatic ductal adenocarcinoma, invasive, poorly differentiated	
47	06_0275	0	100	Primary	Pancreas	Pancreas	Pancreatic adenosquamous carcinoma, poorly differentiated	
48	06_0338	5	90	Primary	Pancreas	Pancreas	Moderately to poorly differentiated pancreatic adenocarcinoma arising in head of pancreas	
49	06_0342	0	100	Metastatic	Pancreas	Liver	Moderately differentiated adenocarcinoma consistent w/ pancreatic primary	
50	06_0343	5	100	Primary	Pancreas	Pancreas	Moderately to poorly diff. pancreatic adenocarcinoma of head of pancreas	
51	06_0347	5	90	Primary	Pancreas	Pancreas	Moderately to poorly diff. mucinous adenocarcinoma w/signet ring cell features	
52	06_0323	0	100	Metastatic	Prostate	Lymph node	Metastatic prostatic adenocarcinoma	
53	06_0328	0	95	Metastatic	Prostate	Lymph node	Metastatic adenocarcinoma consistent w/ prostatic origin	
54	06_0352	10	90	Metastatic	Prostate	Lymph node	Metastatic, high grade prostatic adenocarcinoma	
55	06_0324	0	100	Metastatic	Soft tissue sarcoma	Liver	High-grade sarcoma consistent w/ metastatic leiomyosarcoma from small intestine primary	
56	06_0325	0	100	Metastatic	Soft tissue sarcoma	Lung	Metastatic osteosarcoma	
57	06_0359	0	98	Metastatic	Soft tissue sarcoma	Liver	Multiple nodules of metastatic sarcoma	
58	06_0317	0	90	Metastatic	Thyroid	Neck mass	Metastatic follicular carcinoma, follicular variant	
59	06_0353	0	90	Metastatic	Thyroid	Muscle/Soft tissue	Oncocytic carcinoma of the thyroid with clear cell change	
60	06_0358	0	60	Primary	Thyroid	Thyroid	Papillary carcinoma w/ a few foci of tall cell variant	

*As noted per original surgical pathology report