

**Supplemental figure 1.** Infiltrate type and laterality of ICI-pneumonitis upon diagnostic computed tomography scan. Infiltrate types were classified as having consolidation, ground-glass opacities (GGOs), crazy-paving pattern, traction bronchiectasis, or nodularity and were either unilateral or bilateral. The infiltrate types reported are depicted in the Venn diagram with further treatment group-specific details depicted in the associated table. One case only depicted features of nodularity as is shown as an adjunct to the Venn diagram.

**Abbreviations:** ICI – immune-checkpoint inhibitor; GGOs – ground glass opacities; IVIG – intravenous immunoglobulin

**Supplemental table 1.** Baseline characteristics, steroid-refractory ICI-pneumonitis cases, treatments, and outcomes by individual patients in the case series.

Therapy type	IVIg only							Infliximab only		Combination
Patient number	1	2	3	4	5	6	7	8	9	10
<b>Patient characteristics</b>										
Age at ICI-P diagnosis, years	61	85	35	76	64	73	71	68	64	79
Sex	F	M	M	F	F	M	M	F	F	M
Race	W	W	B	W	W	W	W	W	W	W
Smoking status, pack years	Former, 17/5	Never	Never	Former, 50	Never	Former, 25	Former, 25	Former, 60	Former, 15	Former 37.5
Primary tumor site	NSCLC	Pancreatic	SCLC	NSCLC	NSCLC	NSCLC	RCC	NSCLC	NSCLC	Oropharyngeal
Tumor histology	Adeno	Adeno	N/A	Adeno	Adeno	Adeno	Papillary	Adeno	Adeno	SCC
Initial cancer stage (I-IV)	IIIA	III	III	II	IV	IV	IV	II	IV	IV
Prior systemic therapy	cis, pem	gem, abr	cis, etop, cap	carbo	carbo, pem	carbo, pem	N/A	carbo, paclitaxel	carbo, pem	carbo, paclitaxel
Initial surgery	N	N	N	Y	N	N	N	N	N	Y
Prior chest radiation	Y	N	Y	Y	N	Y	N	Y	N	Y
Last radiation dose to ICI-P onset, days	68	N/A	612	196	N/A	228	N/A	739	N/A	516
PD-1/PD-L1 agent	durva	pembro	nivo	durva	pembro	pembro	pembro	nivo	nivo	pembro
Agents given with ICI	N/A	GVAX, cyclophos	ipi	N/A	carbo, pem	carbo, pem	carbo, pem	ipi	N/A	N/A
Enrolled in clinical trial	N	Y	Y	N	N	N	N	Y	N	N
3-month response to ICI <sup>a</sup>	PR	SD	PD	SD	SD	SD	PD	PR	PD	PR
<b>ICI-pneumonitis characteristics</b>										
Initial ICI-P grade <sup>b</sup>	3	3	3	3	2	2	2	3	3	3
Time to ICI-P, days	92	206	39	167	113	208	63	182	14	77
Number of doses of ICI	6	5	3	4	6	10	3	13	1	3
Initial steroid dose, pred equivalents (mg/day)	100	75	60	60	50	75	237.5	75	60	187.5
Steroid type, route	pred, PO	MP, IV	pred, PO	pred, PO	pred, PO	pred, PO	MP, IV	MP, IV	pred, PO	MP, IV
Total steroid duration	32	43	122	8	103	88	14	97	19	41
Time from steroid to IVIG, days	3	2	7	7	96	2	5	N/A	N/A	3
Total days of administration of IVIG	5	5	14	2	5	4	4	N/A	N/A	5

Time from steroid to infliximab, days	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	12	8
Infliximab dose (mg/kg)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	5	5
Number of hospitalizations	1	1	3	1	1	1	1	1	1	2
Total days hospitalized <sup>c</sup>	43	12	35	9	6	48	13	13	14	27
Intubation for ICI-P	N	N	N	Y	N	N	N	Y	N	N
Extubation post-immunosuppression	N/A	N/A	N/A	N	N/A	N/A	N/A	Y	N/A	N/A
Infection post-immunosuppression	N	N	Y <sup>d</sup>	N	N	N	N	Y <sup>e</sup>	N	N
Cause of death	ICH	CP	CP	ICI-P	PE	ICI-P	ICI-P	PNA <sup>e</sup>	ICI-P	ICI-P

**Abbreviations:** IVIG – intravenous immunoglobulin; ICI-P – immune-checkpoint inhibitor

pneumonitis; F – female; M – male; W – white; B – black; NSCLC – non-small cell lung cancer; SCLC – small-cell lung cancer; adeno – adenocarcinoma; SCC – squamous cell carcinoma; N – no; Y – yes; cis – cisplatin; pem – pemetrexed; etop – etoposide; carbo – carboplatin; cyclophos – cyclophosphamide; pembro – pembrolizumab; nivo - nivolumab; durva – durvalumab; ipi – ipilimumab; PR – partial response; SD – stable disease; PD – progressive disease; pred – prednisone; MP – methylprednisolone; PO – by mouth; IV – intravenous; ICH – intracerebral hemorrhage; CP – cancer progression; PE – pulmonary embolism; PNA – pneumonia; N/A – not applicable.

<sup>a</sup> Response to ICI by RECIST 1.1 criteria

<sup>b</sup> CTCAE grade

<sup>c</sup> Includes all hospitalizations for each patient

<sup>d</sup> Herpes Zoster shingles

<sup>e</sup> Parainfluenza pneumonia