

Supplemental Table 1. Demographic, serological and clinical findings in patients with MN and viral infection

Case no	Age	Sex	Viral marker	Anti-viral therapy	IS therapy	Serum/ Biopsy PLAZR	Proteinuria (g/day) or UPCR (g/g)	Serum Albumin (g/dl)	eGFR	CD4 count	Treatment	Last follow up (months)	Outcomes	Reference
1	58	F	HCV	Yes	Yes	Positive	2.89	1.6	99.2	-	Sofosbuvir, Cyclical cyclophosphamide, Steroids	28	CR	Present data
2	45	M	HIV	Yes	Yes	Positive	16.94	1.7	75.2	377	Cyclical cyclophosphamide, Steroids, Abacavir, Lamivudine, Dolisegavir	24	CR	Present data
3	60	M	HCV	Yes	Yes	Positive	14.3	1.2	30.7	-	Sofosbuvir, Velpatasvir, MPR, Ritonavir	22	PR	Present data
4	70	M	HCV	Yes	Yes	Positive	2.95	2.2	31	-	Sofosbuvir, Velpatasvir, Ritonavir	22	PR	Present data
5	68	F	HCV	Yes	Yes	Positive	5.27	1.5	76	-	Tenofovir, Adefovir, Ritonavir	15	CR	Present data
6	32	F	HCV	No	No	Positive	2.12	3.05	121	-	Supportive	2	PR	Present data
7	50	M	HCV	Yes	No	Negative	2.758	2.29	114.2	-	Sofosbuvir, Velpatasvir	6	CR	Present data
8	40	M	HIV+HCV	Yes	Yes	Negative	6.5	2.29	70	66	Tenofovir, Emtricitabine, Raltegravir, Steroids, MMF, Tacrolimus	12	PR	Kofotolou et al
9	30	F	HCV	Yes	No	Positive	4.3	2.4	99.2	-	Entecavir, ARB	61	CR	Chen et al
10	31	F	HCV	Yes	No	Positive	7.78	2	126.1	-	Entecavir, ARB	46	CR	Chen et al
11	33	M	HCV	Yes	No	Positive	9.48	1.7	107.5	-	Entecavir, ARB	45	PR	Chen et al
12	45	F	HCV	Yes	No	Positive	8.09	2.7	115	-	Entecavir, ARB	97	CR	Chen et al
13	54	F	HCV	Yes	No	Positive	3.9	2.6	103.7	-	Entecavir, ARB	24	PR	Chen et al
14	59	F	HCV	Yes	No	Positive	4	2.2	102.4	-	Entecavir, ARB, Telbivudine	58	PR	Chen et al
15	69	M	HIV	Yes	Yes	Positive	19.65	1.6	52.3	290	Entecavir, ARB, Tacrolimus, Prednisone ----> Cyclophosphamide, Prednisone	97	CR	Chen et al
16	32	M	HIV	Yes	No	Negative	4.24	1.8	124	290	Lamivudine, Zidovudine, Efavirenz, losartan	6	-	Jie Ma et al
17	24	M	HIV	Yes	No	Positive	4.35	2.8	131	873	Lamivudine, Abacavir, Efavirenz	1	-	Jie Ma et al
18	45	F	HIV	Yes	No	Negative	6.9	3.2	115	692	Lamivudine, Zidovudine, Efavirenz, losartan	3	-	Jie Ma et al
19	20	M	HIV	Yes	Yes	Positive	9.87	1.9	131	712	Lamivudine, Abacavir, LPV, Prednisone	88	-	Jie Ma et al
20	59	M	HIV	Yes	No	Positive	10.27	3.2	41	984	Lamivudine, Zidovudine, Efavirenz, Losartan	28	-	Jie Ma et al
21	20	M	HIV	Yes	Yes	Positive	11.9	2.2	131	721	Lamivudine, Zidovudine, Efavirenz, Perindopril, Cyclophosphamide, Prednisone	6	-	Jie Ma et al
22	30	M	HIV	Yes	Yes	Positive	6	1.6	67	623	Lamivudine, Zidovudine, Efavirenz, Cyclophosphamide, Prednisone	1	-	Jie Ma et al
23	27	M	HIV+HBV	Yes	No	Negative	12	1.9	46	630	Lamivudine, Zidovudine, Efavirenz, Entecavir	1	-	Jie Ma et al
24	65	M	HIV	Yes	No	Negative	9.39	2.8	78.6	341	Elvitegravir, Cobicistat, Emtricitabine, Tenofovir disoproxil fumarate, Losartan	7	CR	Dinesh et al
25	23	F	HBV	Yes	Yes	Negative	5.22	-	60	-	Tacrolimus, Tenofovir	24	CR	Nikolopoulou et al
26	43	F	HBV	Yes	Yes	Positive	9.11	-	90	-	Tacrolimus, Entecavir, Ritonavir, Cyclophosphamide	48	PR	Nikolopoulou et al
27	39	M	HBV	Yes	Yes	Positive	1.50	-	55	-	Tacrolimus, Lamivudine	48	CR	Nikolopoulou et al
28	65	F	HBV	No	No	Positive	11.82	-	89	-	Supportive	7	No Remission	Nikolopoulou et al
29	39	F	HBV	No	No	Negative	5.97	-	90	-	Supportive	32	PR	Nikolopoulou et al
30	26	M	HBV	Yes	Yes	Positive	7.92	-	90	-	Tacrolimus, Tenofovir	15	PR	Nikolopoulou et al
31	50	M	HCV	Yes	Yes	Positive	11.08	-	60	-	Tacrolimus, Cyclophosphamide, Steroids, Interferon, Ribavirin	132	Remission	Nikolopoulou et al
32	68	M	HCV	Yes	Yes	Positive	7.08	-	90	-	Tacrolimus, Interferon, Ritonavir	46	Remission	Nikolopoulou et al
33	41	M	HCV	Yes	Yes	Positive	15.91	-	90	-	Tacrolimus, Ritonavir	39	No Remission	Nikolopoulou et al
34	33	F	HCV	No	Yes	Negative	0.02	-	90	-	Tacrolimus	15	PR	Nikolopoulou et al
35	31	M	HIV	No	No	Negative	0.57	-	67	800	Supportive	64	PR	Nikolopoulou et al
36	46	M	HIV	Yes	Yes	Negative	7.55	-	90	630	Tacrolimus, Atazanavir, Emtricitabine, Ritonavir, Tenofovir	64	CR	Nikolopoulou et al
37	26	M	HIV	Yes	No	Negative	0.68	-	90	477	Abacavir, Darunavir, Lamivudine, Ritonavir	16	CR	Nikolopoulou et al
38	47	F	HIV	Yes	No	Positive	1.83	-	90	558	Abacavir, Lamivudine, Rilpivirine	42	No Remission	Nikolopoulou et al
39	44	F	HIV	Yes	No	Negative	4.84	-	16	600	Abacavir, Darunavir, Lamivudine, Ritonavir	27	No Remission	Nikolopoulou et al
40	37	F	HIV	Yes	Yes	Positive	0.19	-	82	480	Ritonavir, Abacavir, Efavirenz, Lamivudine	6	CR	Nikolopoulou et al
41	25	F	HIV+HBV	Yes	No	Negative	2.53	-	60	-	Abacavir, Entecavir, Lamivudine, Lopinavir, Ritonavir	6	No Remission	Nikolopoulou et al
42	74	M	HIV+HBV	Yes	Yes	Positive	0.02	-	61	505	Tacrolimus, Efavirenz, Emtricitabine, Tenofovir	6	No Remission	Nikolopoulou et al
43	73	M	HIV+HCV	Yes	No	Negative	1.28	-	44	571	For HIV: Emtricitabine, Rilpivirine, Tenofovir. For HCV: DAA, Ribabarin	10	PR	Nikolopoulou et al
44	56	F	HIV	Yes	Yes	Positive	8	-	96.5	900	Emtricitabine, Tenofovir, raltegravir, Ritonavir	-	PR	Prudhvi et al
45	48	M	HIV+HCV	Yes	Yes	Positive	4.35	5.1	79	1200	Maraviroc, Efavirenz, Raltegravir, DAA, Ritonavir	-	CR	Meyer et al
46	54	M	HIV	Yes	Yes	No Data	7	2.1	61.9	983	HAART, ACEI/ARB, Mycophenolate mofetil, Prednisone, Mycophenolate mofetil switched to cyclophosphamide	145	No Remission	Charu et al
47	61	M	HIV	Yes	Yes	Negative	10.6	3.3	19.1	331	HAART, ACEI/ARB, Mycophenolate mofetil, Prednisone	140	No Remission	Charu et al

48	42	M	HIV	Yes	No	Positive	-	2.1	88.1	-	-	81	CR	Charu et al
49	59	M	HIV	Yes	No	Negative	1.90	4	2.7	419	-	54	-	Charu et al
50	39	M	HIV	Yes	Yes	Positive	13	1.6	114.3	718	HAART, ACE/ARB, Prednisone, Tacrolimus. Then Rituximab, methylprednisolone	9	No Remission	Charu et al
51	62	M	HIV	Yes	Yes	Positive	3.86	2.8	30.5	375	HAART, ACE/ARB, Prednisone then Cyclophosphamide	9	PR	Charu et al
52	69	F	HIV	Yes	No	Positive	4	3	51.3	296	HAART, ACE/ARB	4	PR	Charu et al
53	63	M	HIV	Yes	Yes	Negative	10	-	95.1	1073	HAART, None	114	-	Charu et al
54	66	M	HIV	Yes	Yes	Positive	8	-	19.1	-	HAART, ACE/ARB, Prednisone, Cyclophosphamide	20	-	Charu et al
55	66	M	HIV	Yes	No	Negative	10	-	78.1	350	HAART, ACE/ARB	42	CR	Charu et al
56	55	M	HIV	Yes	No	Negative	3	2	70.5	234	HAART, ACE/ARB	44	PR	Charu et al
57	44	M	HBV	Yes	Yes	Positive	13.00	1.3	91.1	-	Entecavir, Rituximab	40	CR	Berchtold et al
58	26	M	HBV	Yes	Yes	Positive	7.40	1.77	91.2	-	ACE, Entecavir, Rituximab	-	CR	Berchtold et al
59	57	M	HBV	Yes	No	Positive	10	2.7	104.8	-	Lamivudine, Entecavir	120	Remission	Sasaki et al
60	67	M	HCV	Yes	Yes	Positive	4.2	3.6	62.6	-	DAA, Pulse steroids, Rituximab, Cyclosporine	6	PR	Murakami et al
61	58	F	HCV	Yes	Yes	Positive	2.8	1.6	99.2	-	Cyclophosphamide, Steroids, DAA, Ribavirin	-	CR	Ramachandran et al
62	36	M	HIV+HCV	Yes	Yes	Positive	7	2.4	121.4	1234	Abacavir, Lamivudine, Efavirenz (ACTH gel)	-	PR	El-Husseini et al
63	40	M	HCV	No	Yes	Positive	20.00	1.7	40.5	-	Steroids	-	PR	Saito et al

eGFR presented as ml/min/1.73m²

Underlined proteinuria presented as UPCR (g/g)

ACEi: Angiotensin-converting enzyme inhibitors, ARB: Angiotensin II Receptor Blockers, CR: Complete remission, DAA: Direct-acting antiviral medicines, F: Female, HAART: Highly active antiretroviral therapy, HBV: Hepatitis B, HCV: Hepatitis C, HIV: Human Immunodeficiency Virus, IS: Immunosuppressive, LPV: Lopinavir, MMF: mycophenolate mofetil, MPR: Modified Ponticelli regimen, PLACR: Phospholipase A2 receptor, PR: Partial remission, UPCR: Urinary protein to creatinine ratio

Supplemental Table 2. Renal biopsy findings in patients with MN and viral infection

Case no	Total glomeruli	Globally sclerotic glomeruli	IFTA (%)	IgG	IgA	IgM	C3	C1q	IgG4	Subepithelial deposits	Subendothelial deposits	Intramembranous deposits	Mesangial deposits	TRIs deposits	Reference
1	6	NA	5	3+	Neg	Neg	1+	Neg	NA	NA	NA	NA	NA	NA	Present data
2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Present data
3	6	1	10	3+	Neg	Neg	2+	Neg	Neg	NA	NA	NA	NA	NA	Present data
4	12	NA	NA	3+	1+	Neg	NA	2+	NA	NA	NA	NA	NA	NA	Present data
5	7	NA	10	3+	NA	NA	3+	1+	NA	NA	NA	NA	NA	NA	Present data
6	17	0	5	3+	Neg	Neg	Neg	Neg	Neg	NA	NA	NA	NA	NA	Present data
7	11	NA	NA	3+	Pos	Neg	1+	Neg	NA	NA	NA	NA	NA	NA	Present data
8	6	2	NA	3+	1+	2+	3+	3+	NA	Yes	No	No	Yes	Yes	Kofotolis et al
9	22	0	NA	1+	+	+	+	Neg	NA	+	NA	NA	+	NA	Chen et al
10	40	1	NA	3+	Neg	Neg	2+	Neg	NA	+	NA	NA	+	NA	Chen et al
11	23	0	NA	3+	Neg	+	1+	Neg	NA	+	NA	NA	+	NA	Chen et al
12	5	0	NA	2+	Neg	Neg	1+	Neg	NA	+	NA	NA	-	NA	Chen et al
13	19	0	NA	4+	+	Neg	3+	Neg	NA	+	NA	NA	+	NA	Chen et al
14	2	1	NA	2+	Neg	Neg	Neg	Neg	NA	+	NA	NA	-	NA	Chen et al
15	17	1	NA	3+	Neg	+	2+	Neg	NA	+	NA	NA	+	NA	Chen et al
16	NA	NA	NA	Neg	Neg	Neg	Neg	Neg	Neg	NA	NA	NA	NA	NA	Chen et al
17	NA	NA	NA	2+	NA	NA	NA	NA	Neg	NA	NA	NA	NA	NA	Jie Ma et al
18	NA	NA	NA	1+	NA	NA	NA	NA	NA	Yes	Yes	Yes	NA	NA	Jie Ma et al
19	NA	NA	NA	2+	NA	NA	NA	NA	NA	Yes	NA	NA	NA	NA	Jie Ma et al
20	NA	NA	NA	2+	NA	NA	1+	NA	NA	Yes	NA	NA	NA	NA	Jie Ma et al
21	NA	NA	NA	2+	NA	NA	1+	NA	NA	Yes	NA	NA	NA	NA	Jie Ma et al
22	NA	NA	NA	3+	NA	NA	NA	NA	NA	Yes	NA	NA	NA	NA	Jie Ma et al
23	NA	NA	5	1+	NA	NA	2+	NA	NA	Yes	NA	NA	Yes	NA	Jie Ma et al
24	NA	NA	NA	3+	Neg	1+	2+	2+	3+	Yes	Yes	NA	Yes	NA	Dinesh et al
25	8	0	0	2+	NA	3+	NA	NA	NA	Yes	No	No	No	No	Nikolopoulou et al
26	16	0	10	NA	NA	NA	NA	NA	2+	Yes	No	Yes	No	No	Nikolopoulou et al
27	17	7	30	1+	NA	1+	1+	NA	3+	Yes	No	Yes	Yes	No	Nikolopoulou et al
28	15	2	10	1+	Neg	+	1+	Neg	3+	Yes	Yes	No	Yes	Yes	Nikolopoulou et al
29	21	1	0	2+	+	+/-	+	Neg	Neg	Yes	Yes	No	Yes	Yes	Nikolopoulou et al
30	25	0	0	2+	Neg	+/-	+	Neg	3+	Yes	No	Yes	Yes	Yes	Nikolopoulou et al
31	18	1	15	2+	NA	1+	1+	Neg	1+	Yes	No	Yes	No	Yes	Nikolopoulou et al
32	16	2	5	2+	NA	+	1+	NA	2+	Yes	No	Yes	Yes	No	Nikolopoulou et al
33	16	1	10	3+	NA	NA	2+	NA	2+	Yes	No	No	No	Yes	Nikolopoulou et al
34	28	0	0	1+	NA	NA	NA	NA	1+	Yes	No	Yes	Yes	No	Nikolopoulou et al
35	27	5	10	1+	1+	2+	2+	NA	NA	Yes	Yes	Yes	Yes	No	Nikolopoulou et al
36	23	2	5	1+	Neg	2+	NA	NA	NA	Yes	No	Yes	No	No	Nikolopoulou et al
37	35	2	15	1+	1+	2+	2+	1+	Neg	Yes	No	Yes	Yes	No	Nikolopoulou et al
38	15	1	0	1+	NA	NA	1+	NA	Neg	Yes	No	Yes	No	No	Nikolopoulou et al
39	15	5	60	2+	NA	2+	2+	2+	Neg	Yes	No	Yes	No	No	Nikolopoulou et al
40	12	1	10	3+	1+	2+	NA	NA	2+	Yes	No	Yes	Yes	No	Nikolopoulou et al
41	19	4	5	1+	2+	1+	1+	2+	Neg	Yes	Yes	No	No	No	Nikolopoulou et al
42	5	2	5	2+	1+	1+	1+	1+	NA	Yes	No	Yes	Yes	No	Nikolopoulou et al
43	24	3	5	1+	+	+	+	1+	NA	Yes	No	Yes	No	No	Nikolopoulou et al
44	NA	NA	NA	3+	1+	1+	Trace+	Trace+	NA	Yes	NA	NA	Yes	Yes	Prudhvi et al
45	NA	NA	NA	NA	1+	1+	+	1+	NA	Yes	NA	NA	NA	NA	Meyer et al
46	7	0	<5	3+	Neg	Neg	1	Neg	2	NA	No	No	NA	NA	Charu et al
47	42	43	90	1+	Neg	1	1	Neg	NA	Yes	No	Yes	Yes	NA	Charu et al
48	38	5	10	2+	Neg	1+	1	Neg	3	Yes	No	Yes	No	NA	Charu et al
49	39	3	NA	2+	1+	Neg	1	Neg	1	Yes	No	Yes	Yes	NA	Charu et al
50	32	9	5	3+	Neg	1+	1	1	3	Yes	No	No	No	NA	Charu et al
51	46	42	75	2+	Neg	1	1	Neg	2	Yes	No	Yes	No	NA	Charu et al

52	25	12	10	3+	Neg	1	Neg	3	Yes	No	No	NA	Charu et al
53	28	0	5	2+	Neg	Neg	1	Neg	Yes	No	No	NA	Charu et al
54	14	36	50	NA	NA	NA	NA	NA	Yes	No	No	NA	Charu et al
55	28	0	10	2+	Neg	1	1	3	Yes	No	No	NA	Charu et al
56	45	13	30	1+	Neg	Neg	1	Neg	Yes	No	No	NA	Charu et al
57	NA	NA	5	+	+	Neg	+	NA	NA	NA	NA	No	Berchtold et al
58	NA	NA	5	+	Neg	Neg	+	Neg	+	NA	NA	NA	Berchtold et al
59	12	1	NA	+	Neg	Neg	+	+	Yes	NA	NA	NA	Sasaki et al
60	NA	NA	0	Pos	NA	NA	NA	Pos with IgG1	Yes	NA	NA	NA	Murakami et al
61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Ramachandran et al
62	42	NA	0	2+	Neg	Neg	Trace+	NA	Yes	NA	NA	NA	El-Husseini et al
63	14	NA	NA	Pos	Pos	Neg	Neg	Pos with IgG1	Yes	NA	NA	NA	Salto et al

IFTA: Interstitial fibrosis and tubular atrophy; NA: Not available, Neg: Negative, Pos: Positive, TRIs: Tubuloreticular inclusions.

Supplemental Table 3. Comparison of basic clinical characteristics of reviewed patients with literature

Parameter(s)	Proteinuria g/day	eGFR (ml/min/1.73m ²)	Serum albumin (g/dl)	Anti-PLA2R positivity (%)
Our review (n=63)	7.0 (4.1, 10.0)	89.0 (60.0, 99.2)	2.2 (1.7, 2.8)	67
MENTOR Trial* (n=130)	8.9 (6.8, 12.3)	84.9±29.8	2.5 (2.1, 2.9)	77
	8.9 (6.7, 12.9)	87.4±34.4	2.5 (2.1, 2.9)	71
STARMEN Trial (n=86)	7.4 (5.2–11.5)	79.8±23.5	2.6 (2.2, 2.9)	77
RICYCLO Trial (n=74)	6.0 (4.0–10.0)	84.0±24.0	2.0±1.0	66

eGFR: Estimated glomerular filtration rate; PLA2R: Phospholipase A2 receptor, *Represents data for two arms separately.