

**Supplementary Table 1.** Number of cases of malignancies (excluding NMSC) and NMSC and incidence rates by time in the baricitinib 2mg-4 mg-extended analysis set.

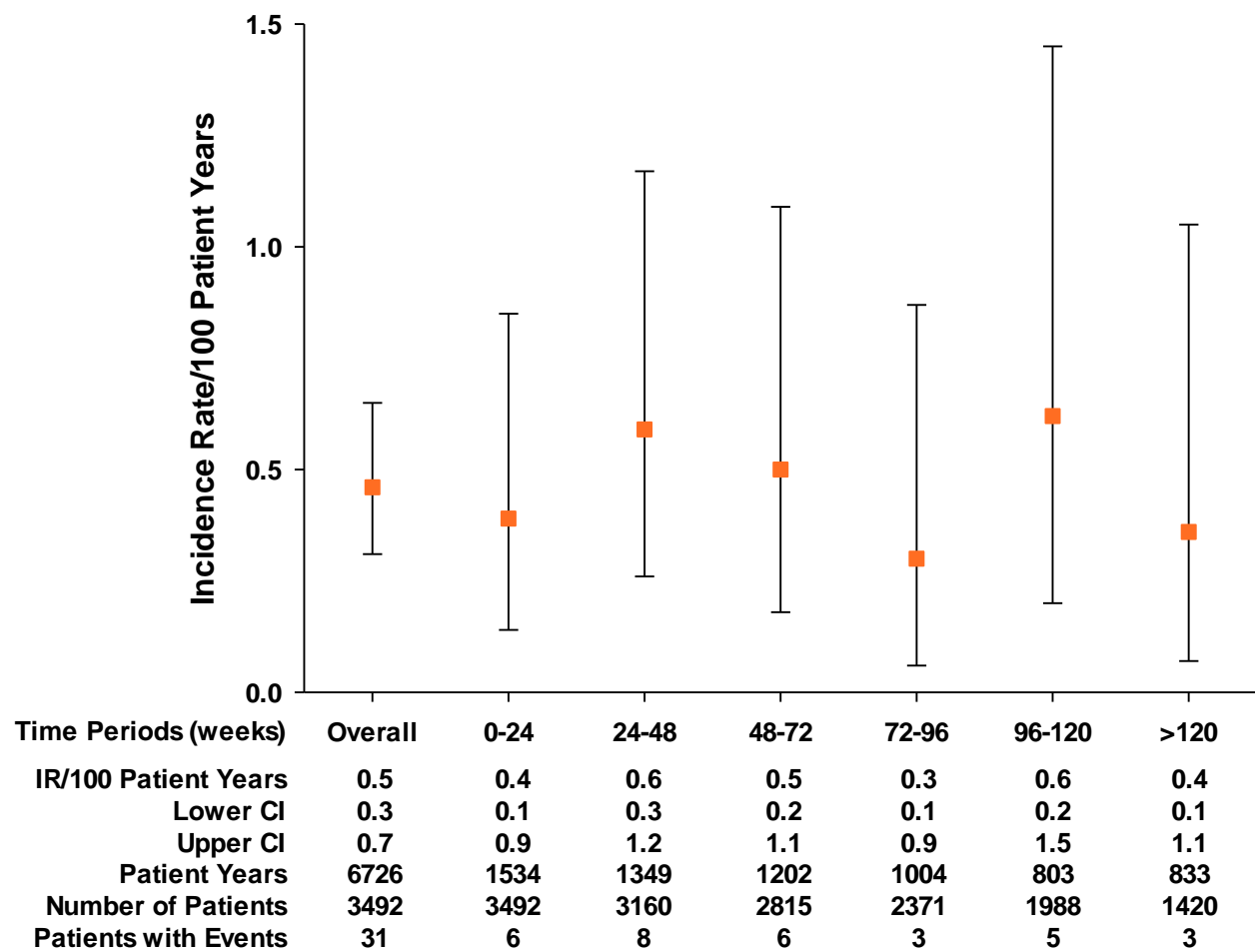
	0-24 wks		24-48 wks		48-72 wks		72-96 wks		96 -120 wks		>120 wks		Overall	
	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479	Bari 2 mg N=479	Bari 4 mg N=479
Malignancies (excluding NMSC)														
Cases, n [IR]	1 [0.5]	1 [0.5]	0	0	1 [1.3]	2 [2.3]	0	1[1.9]	0	1 [2.1]	1 [2.1]	3 [4.3]	3 [0.5]	8 [1.3]
PY	200	206	121	149	77	88	64	54	56	48	47	71	564	615
NMSC														
Cases, n [IR]	0	3 [1.5]	2 [1.7]	2 [1.4]	0	0	0	0	0	1 [2.1]	0	0	2 [0.4]	6 [1.0]
PY	200	206	121	147	76	87	63	53	56	47	47	67	563	607

Bari, baricitinib; IR, incident rate/100 patient-years (patient exposure censored at event); NMSC, non-melanoma skin cancer; n, number of cases; PY, patient-years of exposure.

**Supplementary Table 2.** Case summary of malignancies (excluding NMSC) for all the cases in the baricitinib 2mg-4mg-extended analysis set as randomized. LTE: longterm extension.

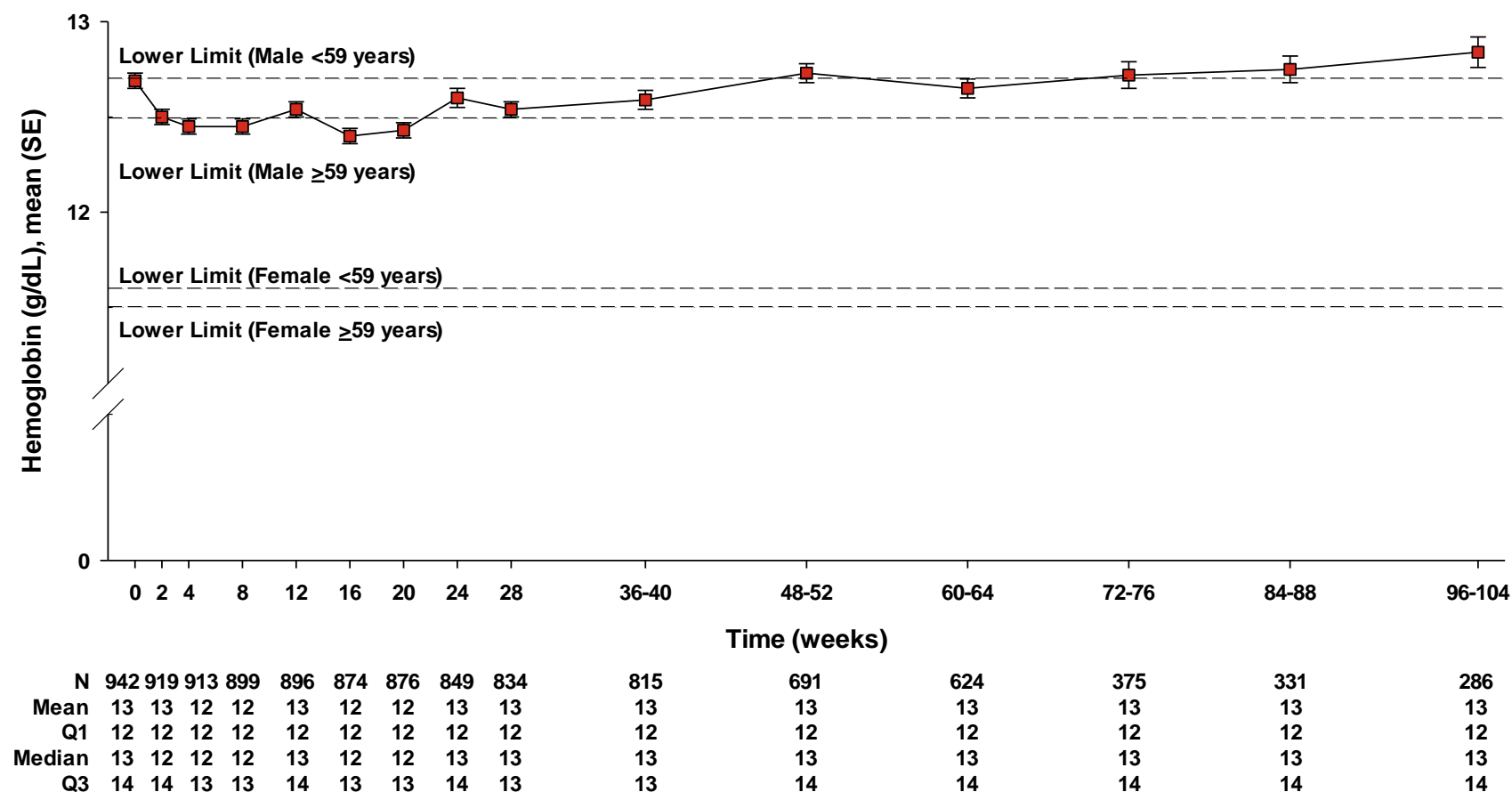
Patient #	Event term	Days from first dose to event start date	Days from rescue/dose change to event start date	Details of rescue/dose change prior to event
Randomized to baricitinib 2 mg				
1	Ovarian low malignant potential tumor	19	NA	NA
2	Invasive ductal breast carcinoma	339	NA	NA
3	Lung neoplasm malignant	479	228	Rescue to 4 mg in LTE
4	Clear cell renal cell carcinoma	575	325	Rescue to 4 mg in LTE
5	Mucoepidermoid carcinoma	785	532	Rescue to 4 mg in LTE
6	Breast cancer	898	NA	NA
7	Papillary thyroid cancer	963	794	Switch to 4 mg
Randomized to baricitinib 4 mg				
1	Rectal cancer	115	NA	NA
2	Renal cancer	361	NA	NA
3	Adenocarcinoma of colon	357	NA	NA
4	Invasive ductal breast carcinoma	401	289	Rescue in originating study
5	Diffuse large B-cell lymphoma	670	NA	NA
6	Breast cancer	690	NA	NA
7	Squamous cell carcinoma of the lung	981	NA	NA
8	Breast cancer	1004	NA	NA
9	Invasive ductal breast carcinoma	1296	NA	NA

**Supplementary Figure 1.** DVT/PE-related events over time for all-bari-RA analysis set (IR/100PY [95% confidence interval, CI]).

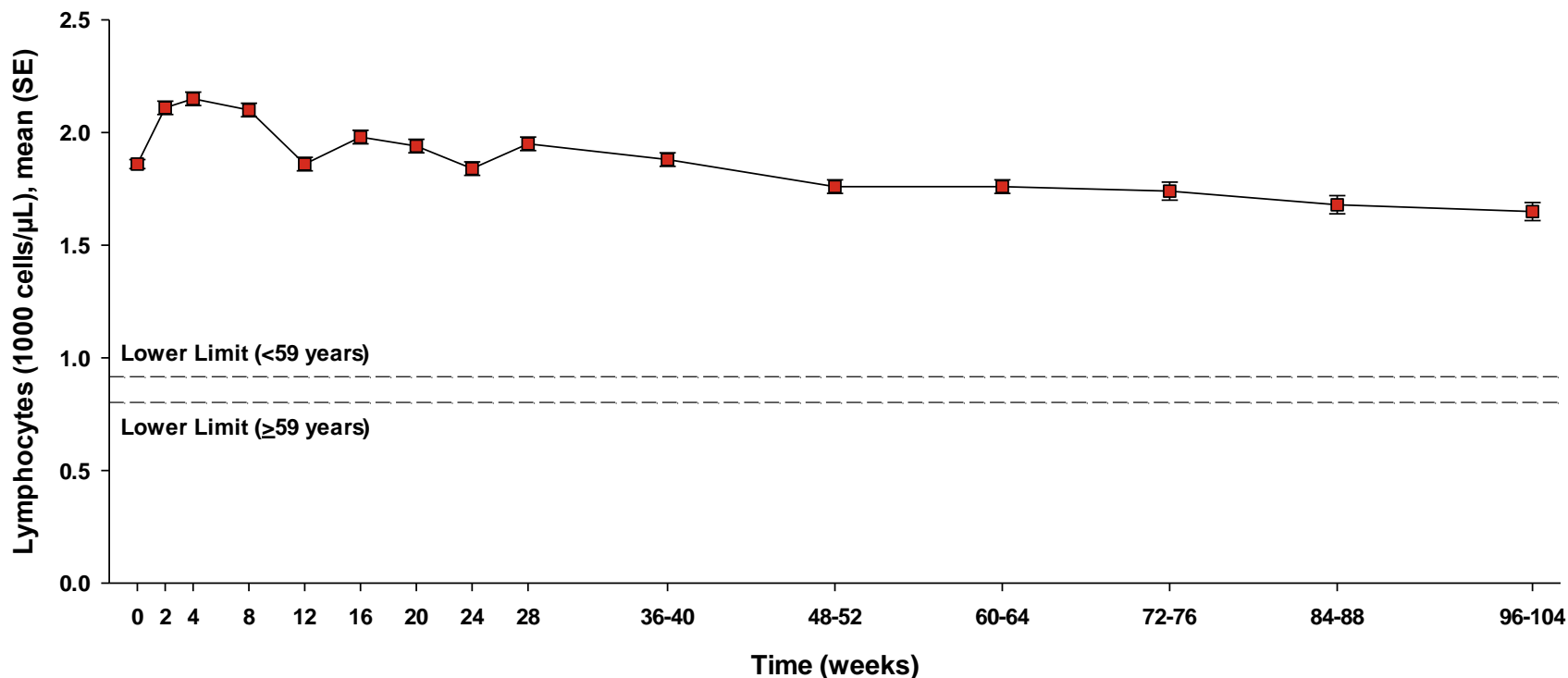


**Supplementary Figure 2.** Selected laboratory and chemistry profiles absolute values over time from the DMARD-inadequate responder 4 mg long-term cohort (extracted from all-bari-RA analysis set for patients initially randomized to and maintained on 4 mg arm in RA-BEAM, RA-BEACON, RA-BUILD, Phase 2 trial NCT01185353, and the LTE). (A) Hemoglobin absolute values over time. (B) Lymphocytes absolute values over time. (C) Neutrophils absolute values over time. (D) Platelet absolute values over time. (E) Creatinine absolute values over time. (F) Alanine aminotransferase (ALT) absolute values over time.

A. Hemoglobin absolute values over time

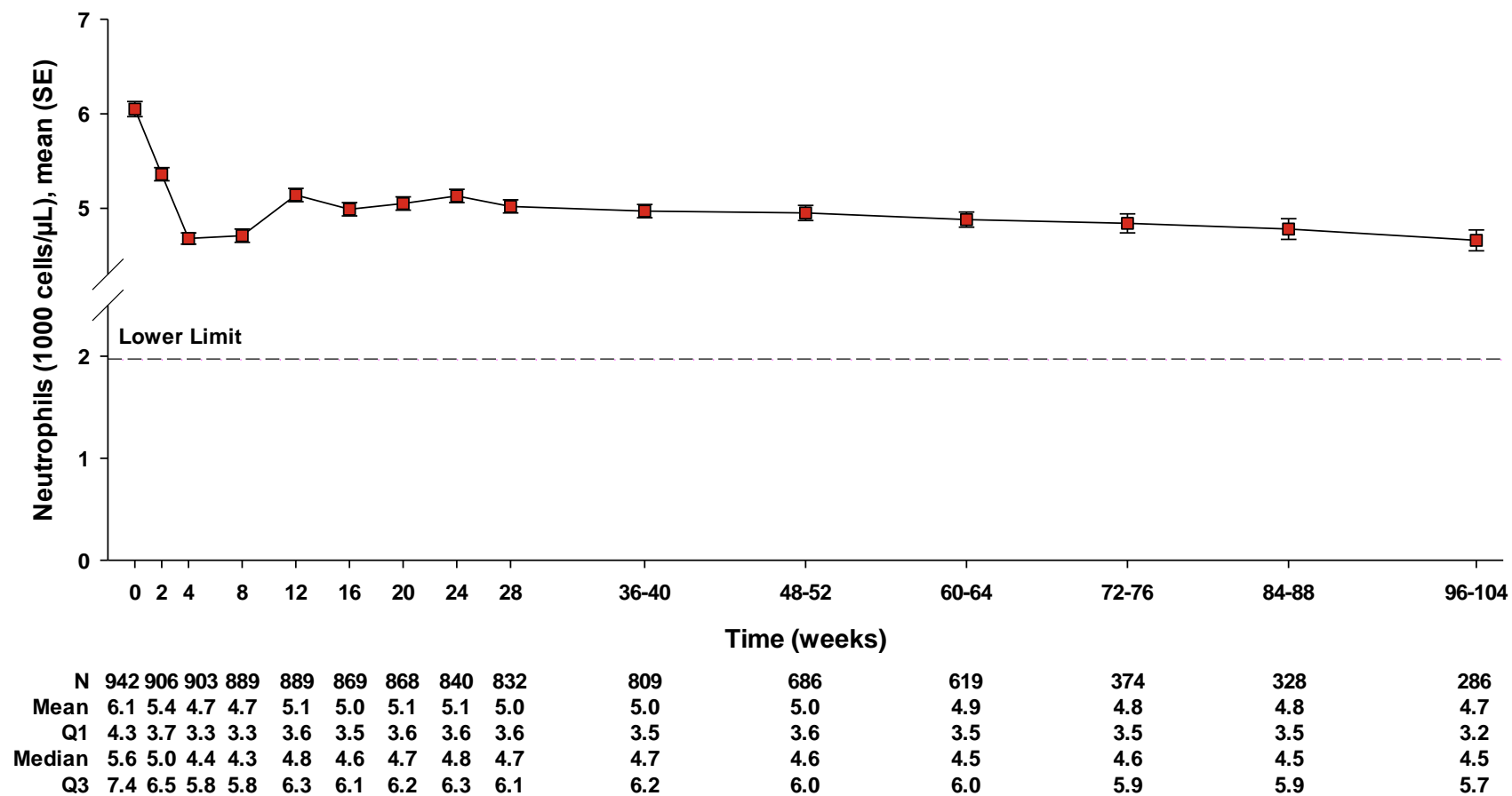


B. Lymphocytes absolute values over time

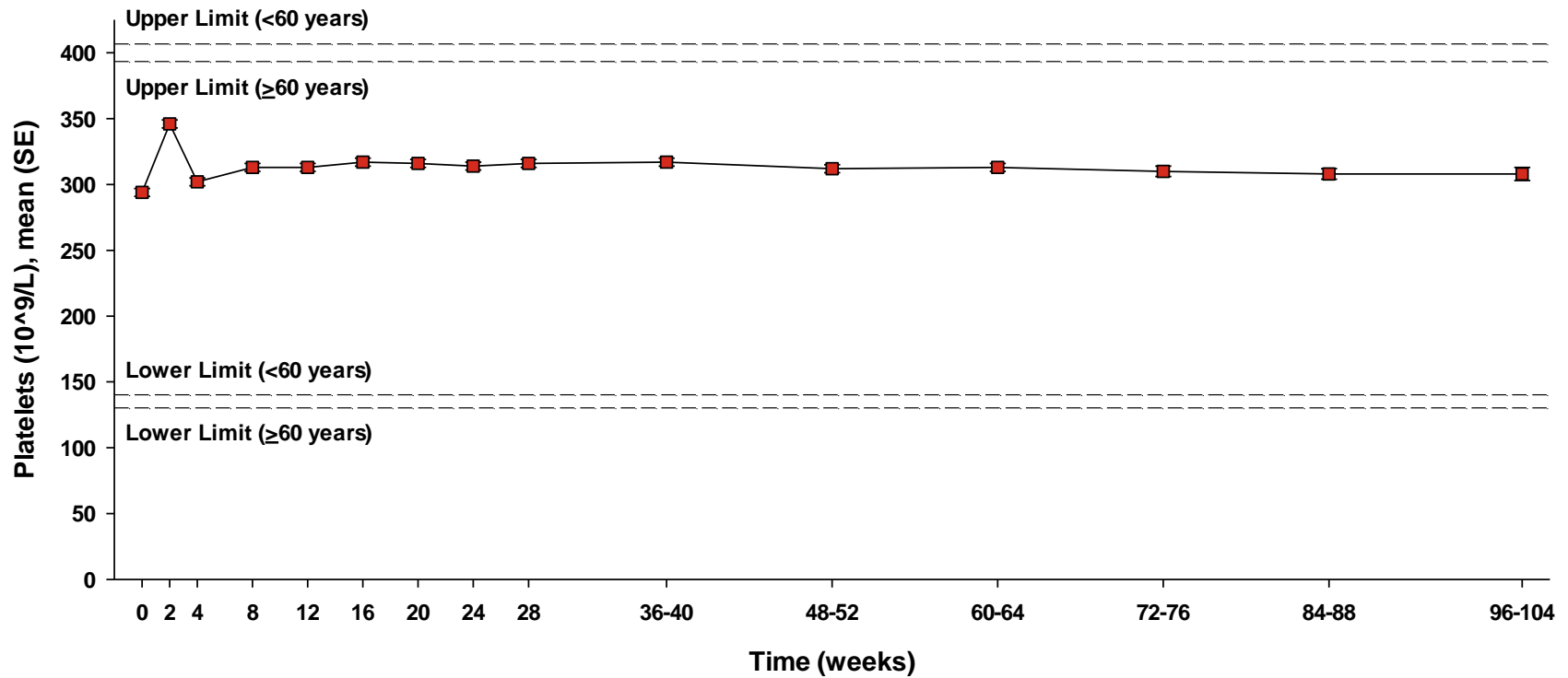


	0	2	4	8	12	16	20	24	28	36-40	48-52	60-64	72-76	84-88	96-104
<b>N</b>	942	906	903	889	889	869	868	840	832	809	686	619	374	328	286
<b>Mean</b>	1.9	2.1	2.2	2.1	1.9	2.0	1.9	1.8	2.0	1.9	1.8	1.8	1.7	1.7	1.7
<b>Q1</b>	1.4	1.5	1.5	1.5	1.3	1.4	1.4	1.3	1.4	1.4	1.3	1.3	1.3	1.2	1.2
<b>Median</b>	1.8	2.0	2.0	2.0	1.7	1.9	1.8	1.7	1.9	1.8	1.7	1.6	1.6	1.6	1.5
<b>Q3</b>	2.2	2.6	2.6	2.6	2.2	2.4	2.3	2.2	2.4	2.3	2.1	2.1	2.1	2.1	2.0

C. Neutrophils absolute values over time

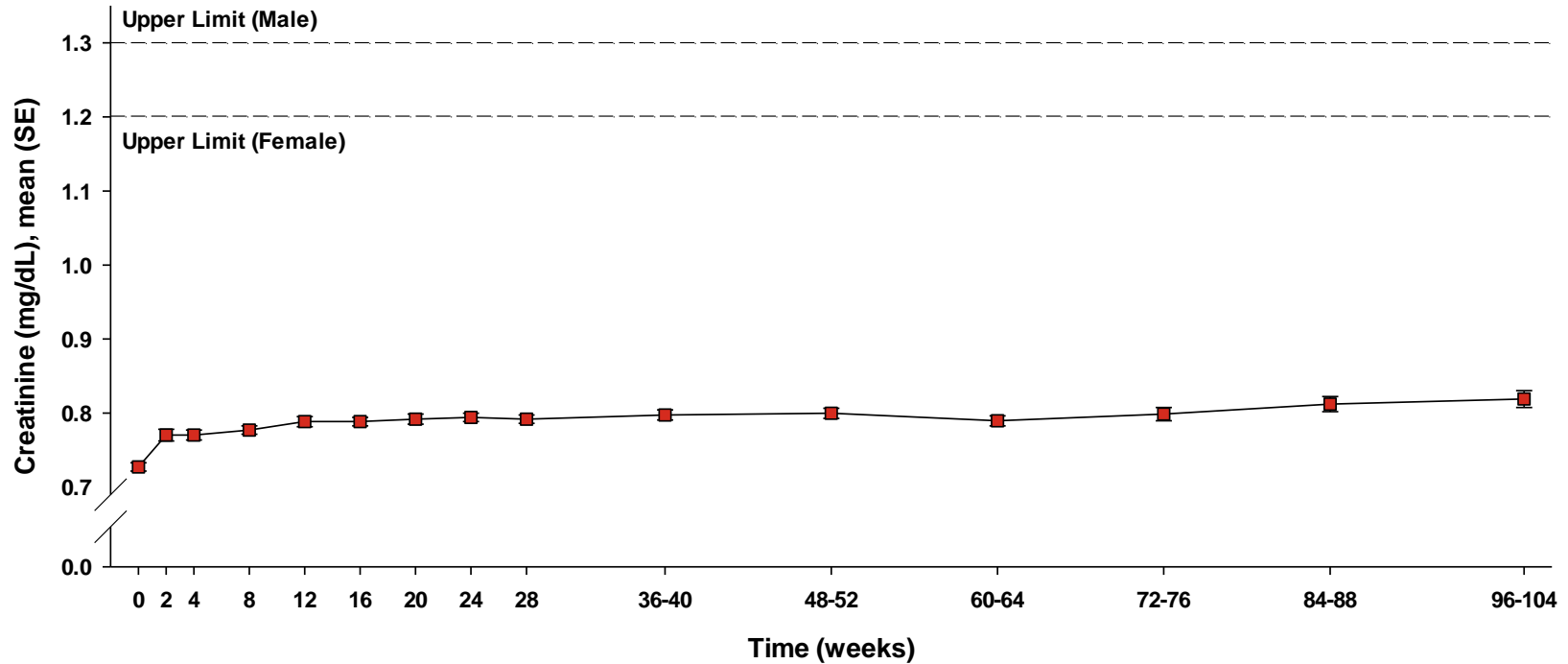


D. Platelet absolute values over time



	0	2	4	8	12	16	20	24	28	36-40	48-52	60-64	72-76	84-88	96-104
N	940	909	896	886	885	869	868	834	821	808	679	617	369	326	283
Mean	294	346	302	313	313	317	316	314	316	317	312	313	310	308	308
Q1	239	280	246	257	260	263	260	255	257	260	259	261	252	251	251
Median	282	329	293	304	306	309	307	305	306	310	299	303	301	301	301
Q3	342	404	350	361	358	366	366	363	362	365	359	361	354	359	354

E. Creatinine values over time



	0	2	4	8	12	16	20	24	28	36-40	48-52	60-64	72-76	84-88	96-104
N	942	927	914	909	890	878	879	858	838	815	699	625	381	332	292
Mean	.73	.77	.77	.78	.79	.79	.79	.79	.79	.80	.80	.79	.80	.81	.82
Q1	.61	.64	.64	.66	.66	.67	.67	.67	.67	.68	.66	.67	.67	.67	.67
Median	.71	.74	.74	.76	.77	.77	.77	.77	.77	.77	.77	.78	.77	.77	.80
Q3	.83	.87	.86	.87	.89	.89	.89	.89	.89	.90	.92	.88	.89	.92	.93
Mean Change from Baseline	.00	.04	.04	.05	.06	.06	.07	.07	.07	.07	.08	.08	.08	.09	.09



F. Alanine aminotransferase (ALT) absolute values over time

