

New Antiviral Treatment of HCV Infected Young Hemophiliacs –Expectations to Cure Hepatitis C

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Introduction and Objectives: of the study is the long term observation of hepatitis C infected hemophiliacs and the effectiveness of the antiviral therapy in our patients. New expectations to cure the illness are presented.

Materials und Methods: 16 hepatitis C infected young adults were observed in our study, 6 of them more then 20 years. We report about the treatment by different therapeutic regimen acc. to the current development of the HCV-treatment experience.

- Therapy: 1. Interferon (3 million units 3 times weekly) (1993);
 2. Interferon + ribavirin (800-1200 mg/day) (1997);
 3. PegIntron 1.5 µg/kg BW. once per week + ribavirin for 48 weeks (2003);
 4. Triple combination therapy with protease inhibitor (2011);
 5. Nucleotid analog polymerase inhibitor sofosbuvir in double combination therapy without PegIntron (2014);

Results: After many years of different therapy regimen no break through could be reported until 2014.

Two patients underwent liver transplant after unsuccessful treatment efforts both interferon (1) and combination therapy (2) (table (1, 2). Another patient's treatment had to be stopped after 6 months because of low response to combination therapy 2 (table 3,4).

Two patients had 48 weeks of combination therapy (3), but had a relapse after stopping the treatment (table 5, 6).

Only one patient could be successfully treated with combination therapy (3). This patient shows 3 years after the therapy no relapse (table 7).

4. Triple combination therapy (PegIntron, ribavirin and protease inhibitors boceprevir and telaprevir) used since 2011 was not applied because of the danger of virus resistance and severe adverse reactions reported.

5.: New combination therapy with sofosbuvir*, a nucleotid analog polymerase inhibitor. Sofosbuvir + ledipasvir (Havroni 400 mg/90 mg), 1 tablet daily for 12 weeks and sofosbuvir (Sovaldi 400 mg) and daclatasvir (Daclinzia 60 mg), 1 – 1 tabl. daily for 12 weeks. Early studies show a virological response rate up to 100% in HCV infected patients. Our patients had no measurable HCV-PCR-RNA under and 18 months after the treatment.

Conclusion: Since late 2014-early 2015 new treatments show an increasing effectivity against HCV infection, which means new hope specially for genotype 1 for cure the HCV infection without relapse.

*Sofosbuvir: HCV-NS5B inhibitor
 Daclatasvir and Ledipasvir: HCV-NS5A inhibitor
 inhibits the virus RNA replication

Patient no.	Age (years observed)	Haemophilia	Factor VIII/IX-activity	HIV-infection	HCV-anti-body positive	HCV-infection supposed	HCV-RNA posit.	Genotype	Symptoms, clinical findings	Treatment	Anti HBs	HA-Imm-nisation
1	51 1985-95 (10y)	A	2%	no	1989	before 1984	yes	Okamoto II, Simmonds 1b	liver cirrhosis, blood vomiting, thrombocytopenia, hepatosplenomegalia	liver transplant 7/95	+	not known
2	47 1984-03 (19y)	B	2-3%	no	1989	before 1984	yes	Okamoto II, Simmonds 1b	chronic aggressive hepatitis thrombocytopenia, itching skin	1)2) liver transpl. 2003	+	+
3	36 1980-13 (33y)	A	3-4%	no	1989	1981	Yes	Okamoto II, Simmonds 1b	no	2) failed	4) +	+
4	41 1980-16 (36y)	A	<1%	no	1989	1981	Yes	Okamoto II, Simmonds 1b	no	3) failed 5) successfull	4) +	+
5	42 1981-16 (35y)	A	<1%	no	1989	1981	Yes	Okamoto II, Simmonds 1b	no	3) failed 5) successfull	4) +	+
6	39 1984-16 (32y)	A	1-2%	no	1989	before 1984	Yes	Okamoto II, Simmonds 1b	no	3) successfull	4) +	+

table a) 1) α-interferon 3 Mio units 3 times weekly sc. 2) α-interferon+ribavirin 3 Mio units 3 times weekly+1200mg/day orally
 3) Peginterferon+ribavirin 1,5mg/kg BW weekly sc. +800-1200mg/day for 48 weeks orally 4) by active immunisation
 5) Polymerase inhibitor sofosbuvir in double combination therapy 2014 - 2015

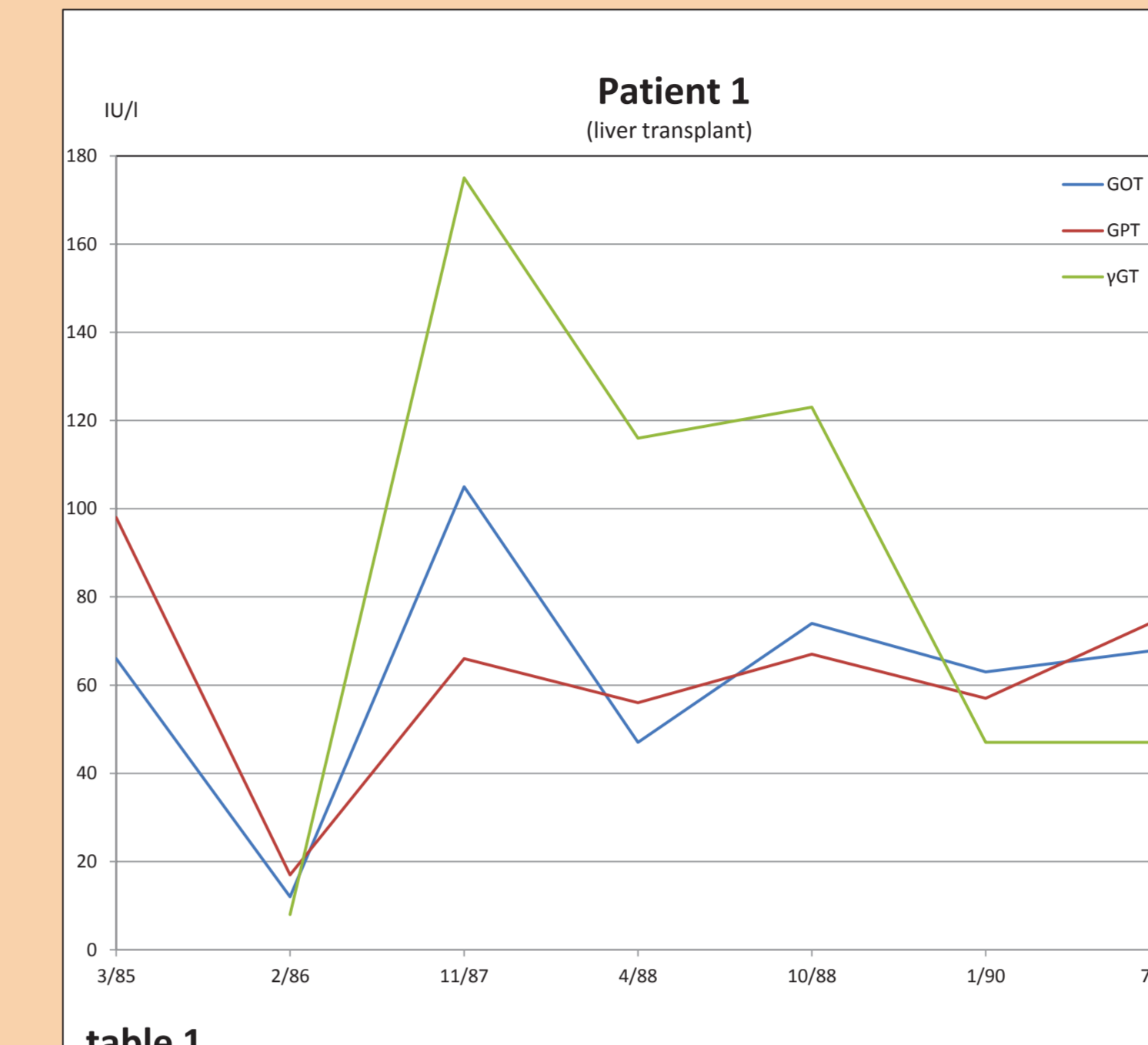


table 1

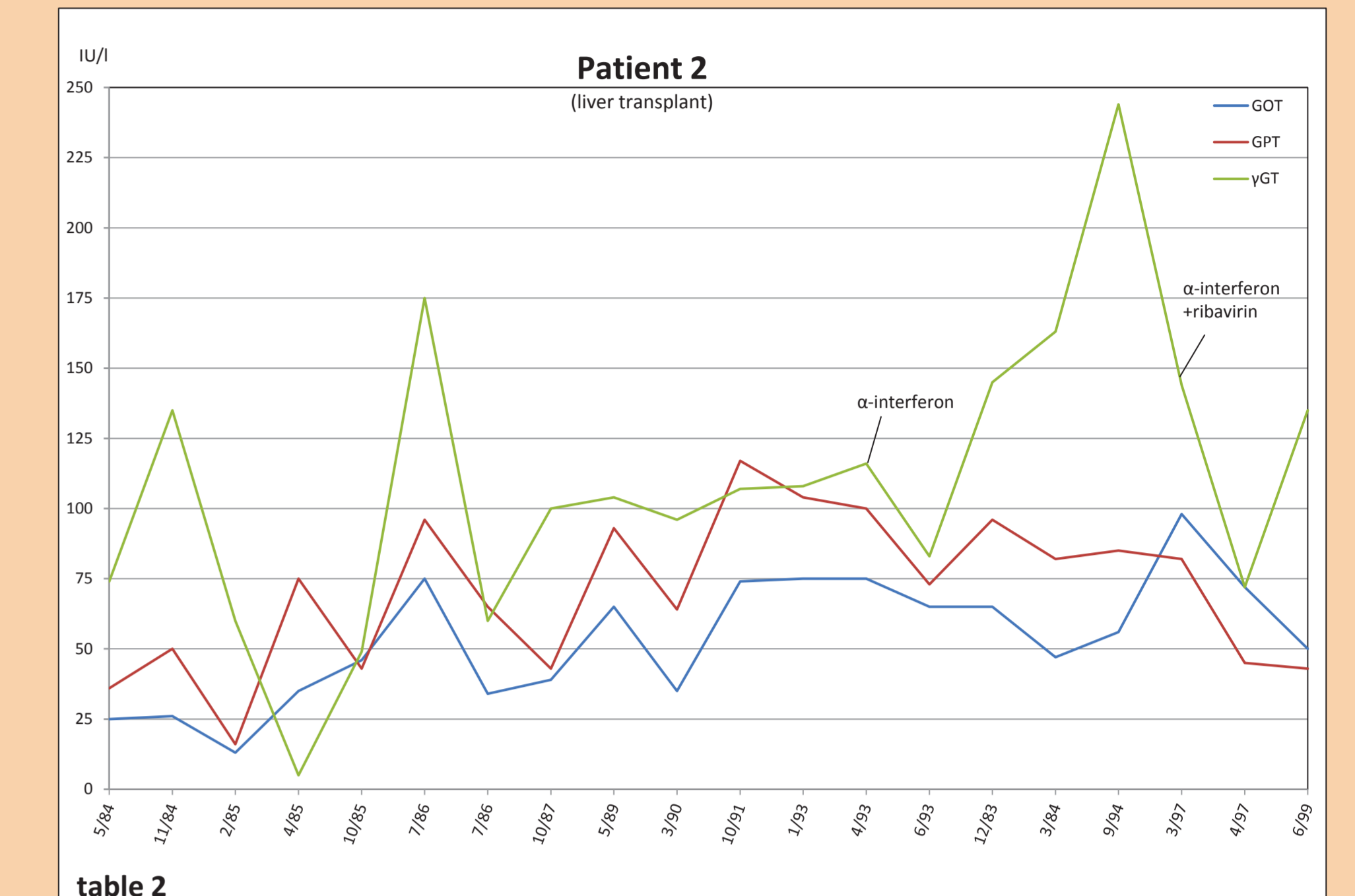


table 2

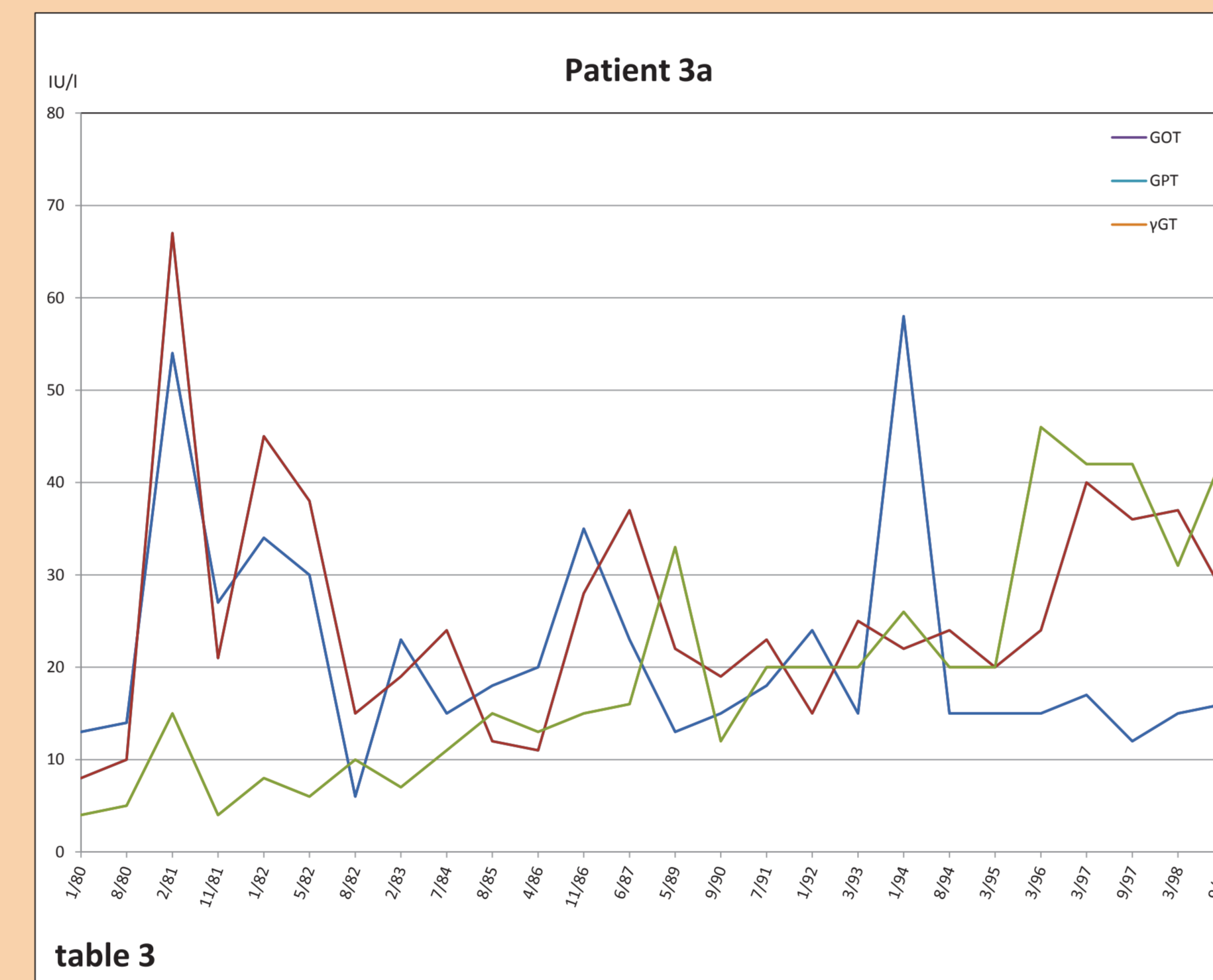


table 3

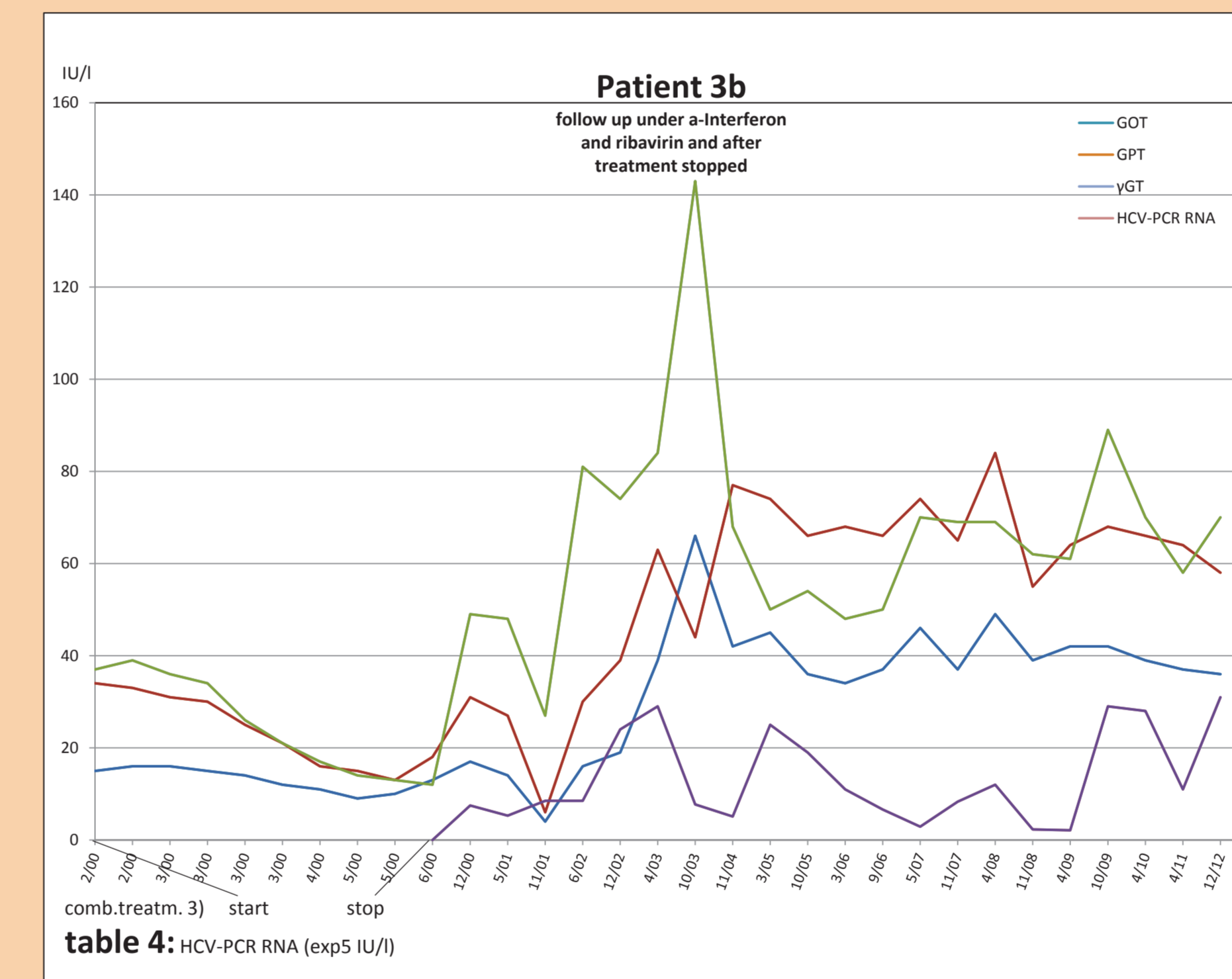


table 4: HCV-PCR RNA (exp5 IU/l)

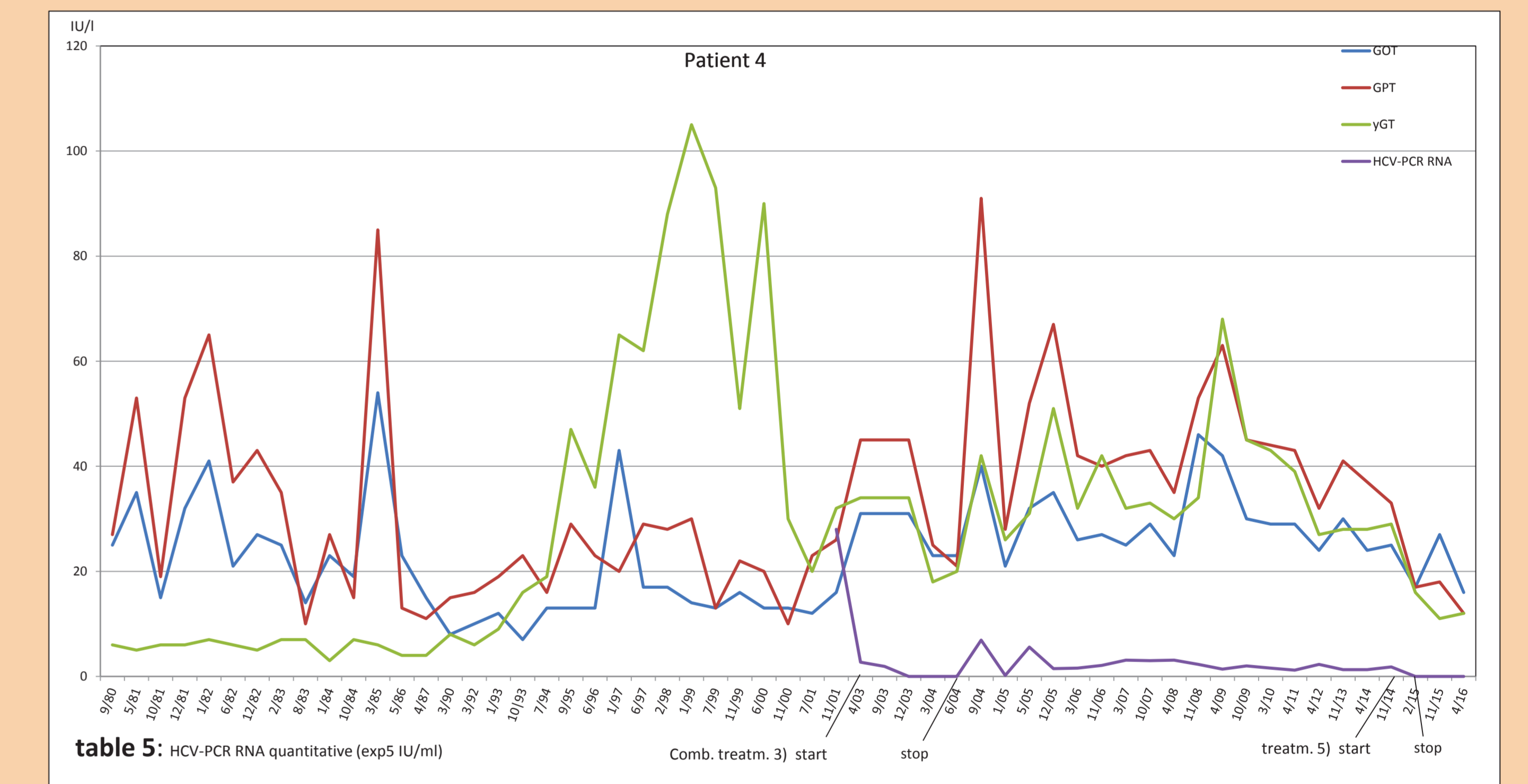


table 5: HCV-PCR RNA quantitative (exp5 IU/ml)

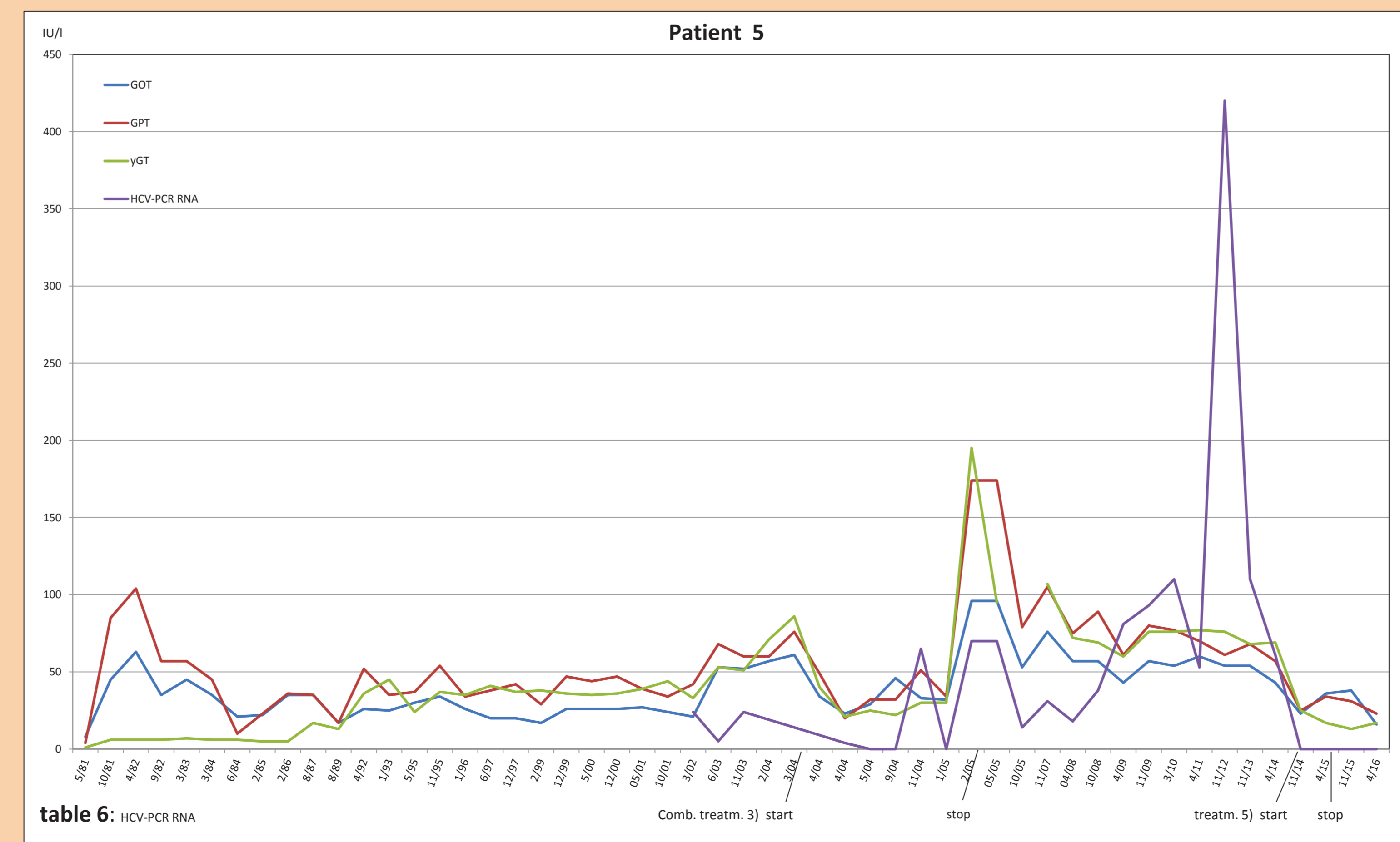


table 6: HCV-PCR RNA

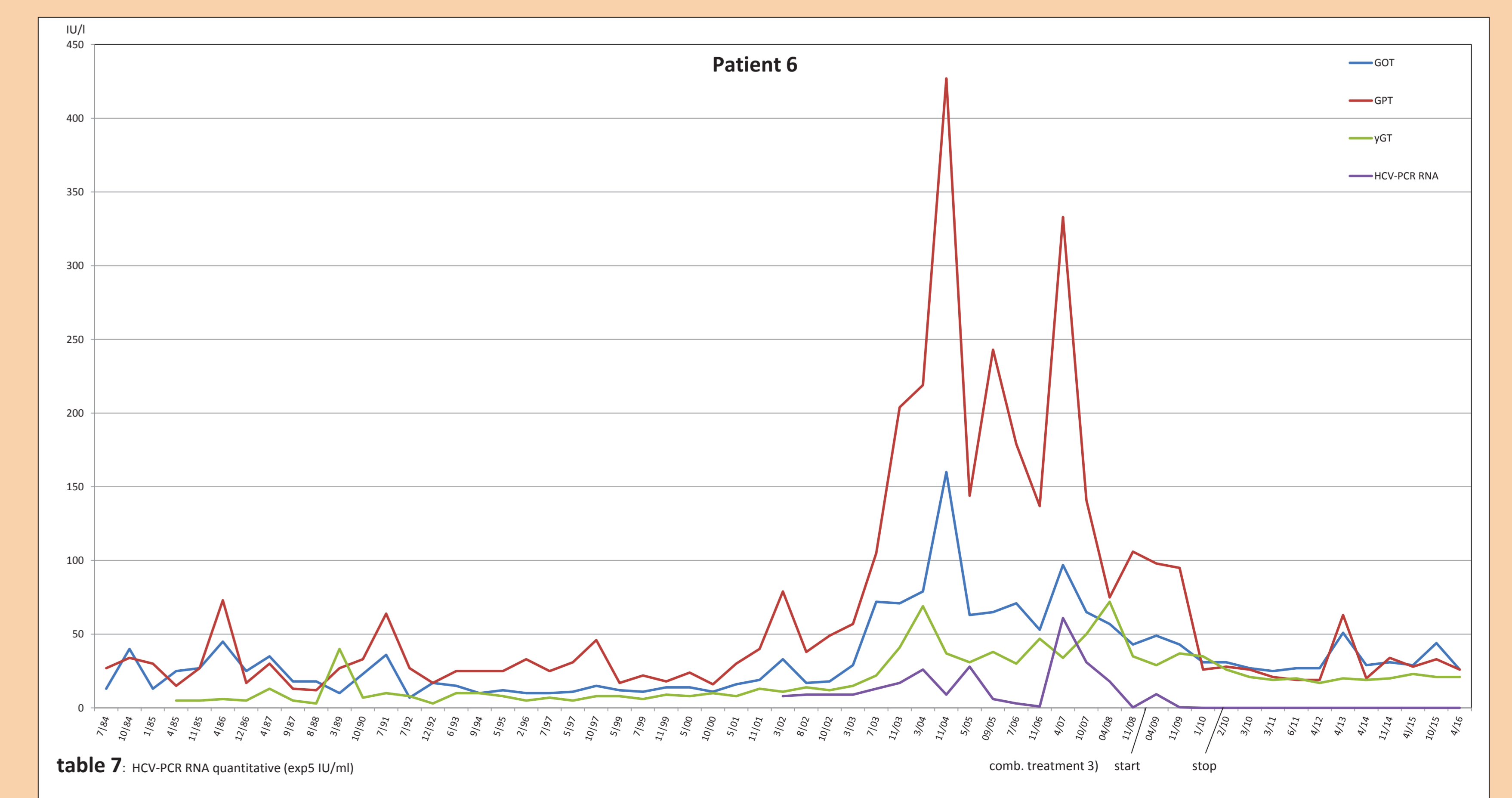


table 7: HCV-PCR RNA quantitative (exp5 IU/ml)

