

Case Presentations of TPE Patients

JANET ENG, D.O. FACEP,
CLINICAL DIRECTOR, MDLIFESPAN

Case 1

- 55 yo female initially evaluated for poor energy, brain fog, inability to lose weight, grief, family history of cancer and preventative health
- Treatment: detoxification , weight loss medications, dietary recommendations, laboratory evaluation
- Initial TPE to reduce biological age

Case 1

- 5 TPEs, ~ 3 months between each TPE.
- Had less brain fog for 2nd TPE but still struggled.
- 4th TPE noted her brain fog and memory were better but still had incidents
- 5th TPE “pistons in her brain are firing faster”
- One month after 5th TPE, brain processing faster, able to recall faster, feels sharper. Wants to challenge her brain more

Case Presentation 1

https://drive.google.com/file/d/1yHC34Khr2jbKSrXtfmjtBLYiXclqbCP3/view?usp=drive_link

CNS Vital Signs Report		Test Date: September 20, 2023 23:30:26	
Patient ID: [REDACTED]		Administrator: [REDACTED]	
Age: 55		Language: English (United States)	
Total Test Time: 33:42 (min:secs)	CNSVS Duration: 33:21 (min:secs)		CNSVS Online Version 1.1.18

Patient Profile	Percentile Range				> 74	25 - 74	9 - 24	2 - 8	< 2
	Standard Score Range				> 109	90 - 109	80 - 89	70 - 79	< 70
Domain Scores	Patient Score	Standard Score	Percentile	VI**	Above	Average	Low Average	Low	Very Low
Neurocognition Index (NCI)	NA	86	18	Yes			X		
Composite Memory	86	77	6	Yes				X	
Verbal Memory	48	87	19	Yes			X		
Visual Memory	38	78	7	Yes				X	
Psychomotor Speed	182	116	86	Yes	X				
Reaction Time*	829	75	5	Yes				X	
Complex Attention*	11	86	18	Yes			X		
Cognitive Flexibility	26	75	5	Yes				X	
Processing Speed	44	90	25	Yes		X			
Executive Function	28	77	6	Yes				X	
Simple Attention	39	92	30	Yes		X			
Motor Speed	137	128	97	Yes	X				

CNS Vital Signs Report	
Patient ID: [REDACTED]	Test Date: October 1, 2024 23:35:56
Age: 56	Administrator: [REDACTED]
Total Test Time: 34:53 (min:secs)	Language: English (United States)
CNSVS Duration: 34:40 (min:secs)	CNSVS Online Version 2.0.5

Patient Profile	Percentile Range				> 74	25 - 74	9 - 24	2 - 8	< 2
	Standard Score Range				> 109	90 - 109	80 - 89	70 - 79	< 70
Domain Scores	Patient Score	Standard Score	Percentile	VI**	Above	Average	Low Average	Low	Very Low
Neurocognition Index (NCI)	NA	88	21	No			X		
Composite Memory	98	102	55	Yes		X			
Verbal Memory	52	99	47	Yes		X			
Visual Memory	46	103	58	Yes		X			
Psychomotor Speed	180	115	84	Yes	X				
Reaction Time*	333	153	99	No	X				
Complex Attention*	31	22	1	No					X
Cognitive Flexibility	7	49	1	No					X
Processing Speed	43	88	21	Yes			X		
Executive Function	31	81	10	Yes			X		
Simple Attention	39	92	30	Yes		X			
Motor Speed	136	127	96	Yes	X				

CNS Vital Signs Report	
Patient ID: [REDACTED]	Test Date: January 31, 2025 15:10:47
Age: 57	Administrator: [REDACTED]
Total Test Time: 31:50 (min:secs)	Language: English (United States)
CNSVS Duration: 31:36 (min:secs)	CNSVS Online Version 2.0.5

Patient Profile	Percentile Range				> 74	25 - 74	9 - 24	2 - 8	< 2
	Standard Score Range				> 109	90 - 109	80 - 89	70 - 79	< 70
Domain Scores	Patient Score	Standard Score	Percentile	VI**	Above	Average	Low Average	Low	Very Low
Neurocognition Index (NCI)	NA	96	40	Yes		X			
Composite Memory	93	91	27	Yes		X			
Verbal Memory	52	99	47	Yes		X			
Visual Memory	41	87	19	Yes			X		
Psychomotor Speed	202	133	99	Yes	X				
Reaction Time*	810	78	7	Yes				X	
Complex Attention*	8	96	40	Yes		X			
Cognitive Flexibility	32	84	14	Yes			X		
Processing Speed	46	94	34	Yes		X			
Executive Function	34	85	16	Yes			X		
Simple Attention	40	107	68	Yes		X			
Motor Speed	154	146	99	Yes	X				

Case 2

- 62 year old male with history of high stress, obesity, alcohol and tobacco use
- TPE for toxin removal. Initially had 3 TPE with one additional TPE

Lab Company												DATA TPE3				
Date			5/1/2023	6/28/2023	7/25/2023	8/22/2023	9/5/2023	10/31/2024	1/25/2024	5/15/2024	2/1/2025					
TEST	Low Range	High Range	Average 1 & 2	TPE 1	TPE 2	TPE 3	2 weeks	6 weeks	6 months	12 months	24 months	2 weeks	6 weeks	6 months	12 months	24 months
BIOMARKERS																
Creatinine	0.5	1	1.15				1.1	1.1	1	0.9	0.9	-4.35%	-4.35%	-13.04%	-21.74%	-21.74%
Uric Acid	3	6	6.35				5.2	4.9	5.5	5.1	4.8	-18.11%	-22.83%	-13.39%	-19.69%	-24.41%
hs-CRP	0	1	1.65				0.5	0.5	0.9	0.5	0.81	-69.70%	-69.70%	-45.45%	-69.70%	-50.91%
β-gal	0	750	1703				1478	4427	4123	3424	854	-13.21%	159.95%	142.10%	101.06%	-49.85%
IL-8	0	20	24.5				20.2	15.7	12.9	12.8	8.2	-17.55%	-35.92%	-47.35%	-47.76%	-66.53%
MPO	0	450	483				378	356	356	320	287	-21.74%	-26.29%	-26.29%	-33.75%	-40.58%
IMMUNE FUNCTION																
CD19	300	650	125				124	146	117	141	160	-0.80%	16.80%	-6.40%	12.80%	28.00%
TOXINS																
Thallium	0	0.24	0.455				0.11	0	0.19	0.1	0.2	-75.82%	-100.00%	-58.24%	-78.02%	-56.04%
Bismuth	0	0.58	0.715				0	0	0.16	0.21	0.33	-100.00%	-100.00%	-77.62%	-70.63%	-53.85%
2,4-Dichlorophenoxyacetic Acid (2,4-D)	0	0.5	1.73				0.82	0.67	0.6	0.36	0.38	-52.60%	-61.27%	-65.32%	-79.19%	-78.03%
Dimethylphosphate (DMP)	0	9.1	9.28				8.83	0.24	8.98	8.01	1.93	-4.85%	-97.41%	-3.23%	-13.69%	-79.20%
Atrazine	0	0.02	0.085				0.02	0.01	0.02	0.02	0.01	-76.47%	-88.24%	-76.47%	-76.47%	-88.24%
4-Methylhippuric Acid (4MHA)	0	65.6	76.655				38.77	3.4	0.33	2.08	23.71	-49.42%	-95.56%	-99.57%	-97.29%	-69.07%
Perfluorobutanoic acid (PFBA)	0	0.066	0.346				0.132	0.112	0.095	0.78	0.075	-61.85%	-67.63%	-72.54%	125.43%	-78.32%
Perfluoropentanoic acid (PFPeA)	0	0.193	0.322				0.256	0.248	0.295	0.211	0.204	-20.50%	-22.98%	-8.39%	-34.47%	-36.65%
Perfluoroundecanoic acid (PFUnA)	0	0.695	2.967				1.52	0.148	0.158	0.138	0.142	-48.77%	-95.01%	-94.67%	-95.35%	-95.21%

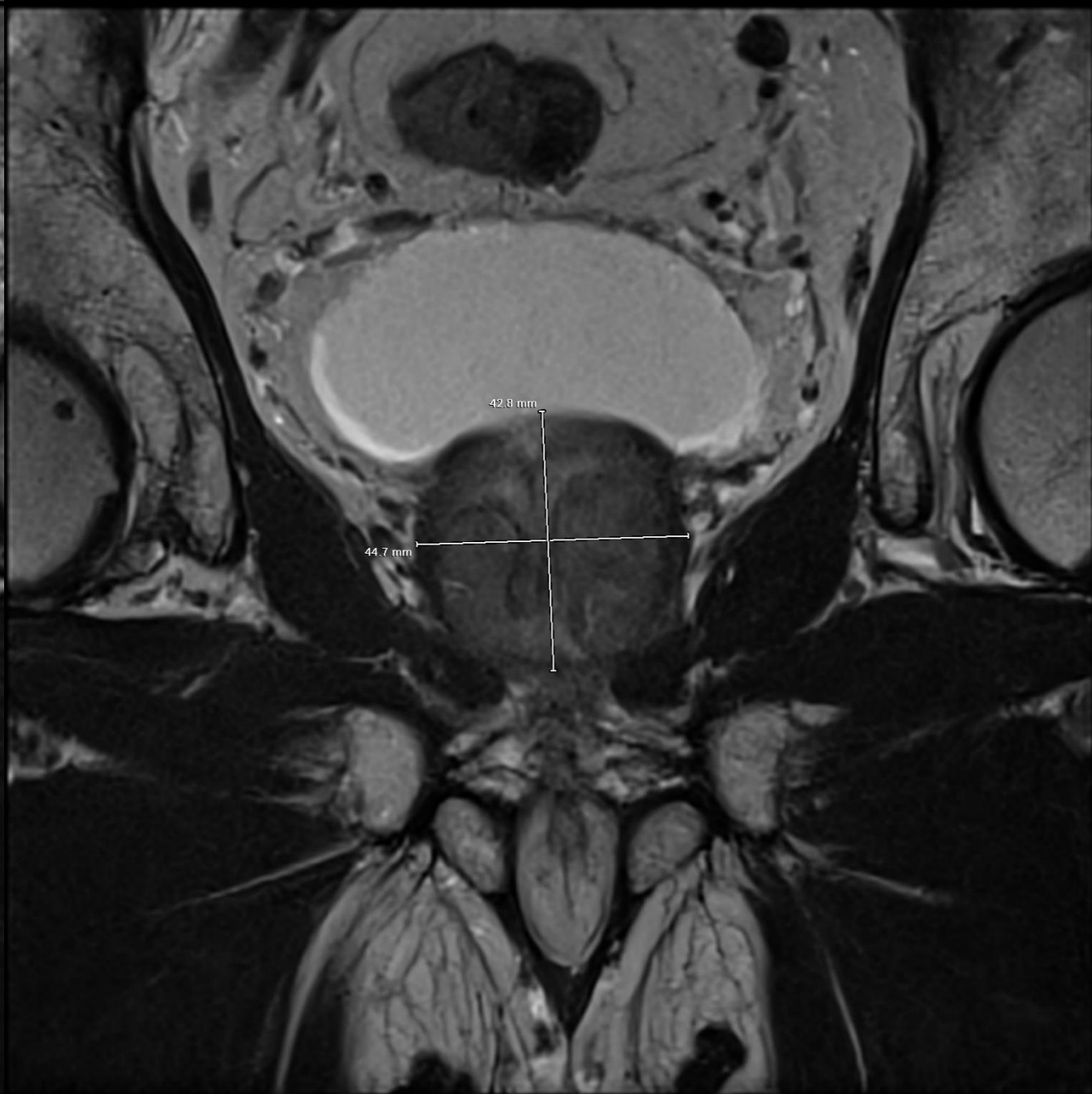
Deidentified Data Used with Patient's Permission

Case Presentation 3

https://drive.google.com/file/d/1kvlpaFpsKNxhk7naeY1SL_mESo5jwM88/view?usp=drive_link



PreTPE



PostTPE

Results

- Previous Annual Oncotrace all Negative
- Pre TPE
5/2024 Oncotrace - PanCK and CD31 DIM and Neg CTC w OncoDClare as Cancer
- Post TPE
11/2024 Oncotrace - EpCam 75%; CD133 DIM; Nanog 25%; Sox2 DIM; PSMA 100%; panCK 100% with CTC 2.2
- 3/2025 Oncotrace - EpCam 75%; CD133 DIM; Nanog 25%; Sox2 DIM; PSMA 100%; panCK 100% with CTC 2.0

Deidentified Data Used with Patient's Permission

Bartges JW. Therapeutic plasmapheresis. Semin Vet Med Surg Small Anim. 1997 Aug;12(3):170-7. doi: 10.1016/s1096-2867(97)80030-8. PMID: 9283242.

Tani T, Numa K, Hanasawa K, Kodama M. Blood purification therapy in cancer treatment. Ther Apher. 1998 Aug;2(3):182-4. doi: 10.1111/j.1744-9987.1998.tb00101.x. PMID: 10227767.

RESULTS

Lab Company													DATA TPE5			
Date			11/1/2023	12/3/2023	1/4/2024	1/30/2024	2/27/2024	3/26/2024	4/1/2024	5/1/2024	9/1/2024	3/1/2025				
TEST	Low Range	High Range	Initial values	TPE 1	TPE 2	TPE 3	TPE 4	TPE 5	2 week values	6 week values	6 month values	12 month values	Delta at 2 weeks	Delta at 6 weeks	Delta at 6 months	Delta at 12 months
BIOMARKERS																
creatinine	0.5	1	1.1						1	1	1.09	0.95	-9.09%	-9.09%	-0.91%	-13.64%
VitD	50	100	37						24	30	41.9	57.5	-35.14%	-18.92%	13.24%	55.41%
hs-CRP	0	1	3.6						1.1	1.1	2.01	2.33	-69.44%	-69.44%	-42.56%	-35.28%
β-gal	0	750	2478						1551	2552	4258	1128	-37.41%	2.99%	71.83%	-54.48%
MPO	0	450	1521						458	412	365	382	-69.89%	-72.91%	-76.00%	-74.88%
IMMUNE FUNCTION																
CD19	300	650	260						296	319	189	293	13.85%	22.69%	-27.31%	12.69%
CD56	225	600	182						273	177	123	240	50.00%	-2.75%	-32.42%	31.87%
TOXINS																
Tungsten	0	0.12	0.75						0.05	0	0	0	-93.33%	-100.00%	-100.00%	-100.00%
Mercury	0	0.57	1.54						0.39	0.45	0.39	0.34	-74.68%	-70.78%	72.59%	-77.92%
BisphenolA (BPA)	0	2.12	7.415						1.17	2.09	1.68	0.81	-84.22%	-71.81%	-77.34%	-89.08%
Dimethylphosphate (DMP)	0	9.1	12.215						3.58	2.96	4.77	2.76	-70.69%	-75.77%	-60.95%	-77.40%
2-Hydroxyisobutyric Acid (2HIB)	0	795	1304.56						37.67	400.93	41.45	43	-97.11%	-69.27%	-96.82%	-96.70%
Glyphosate	0	1.65	6.82						0.58	0.12	1.45	0.77	-91.50%	-98.24%	-78.74%	-88.71%
mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	0	8.99	48.58						7.46	1.61	2.7	7.23	-84.64%	-96.69%	-94.44%	-85.12%
N-acetyl-S-(2-carbamoyl-ethyl)-cysteine (NAE)	0	82	115.415						66.28	12.47	9.47	29.22	-42.57%	-89.20%	-91.79%	-74.68%

Case 4

- 62 y.o female with history of stress to her adrenals, lyme disease, hair loss, physical and mental health issues.
- Small framed 5'5". Weighs 115#
- 6/2022 first diagnosed with + Lyme and Parvovirus
- Had breast implants that were subsequently removed in 2018
- TPE discussed in detail to help with chronic toxicity. Patient underwent 5 TPE procedures

Results

Lab Company												DATA TPE3			
Date			7/1/2023	8/9/2023	9/5/2023	11/13/2023	12/21/2023	1/22/2024	5/3/2024	11/15/2024					
TEST	Low Range	High Range	Average 1 & 2	TPE 1	TPE 2	TPE 3	2 weeks	6 weeks	6 months	12 months	Delta at 2 weeks	Delta at 6 weeks	Delta at 6 months	Delta at 12 months	
VitD	50	100	49				55	65	61	72	12.24%	32.65%	24.49%	46.94%	
β-gal	0	750	1698				1392	1508	3284	625	-18.02%	-11.19%	93.40%	-63.19%	
8-OHdG	0	10	12.5				7.2	3.8	3.8	3.11	94.59%	2.70%	2.70%	-15.95%	
MPO	0	450	32392				528	632	596	425	-98.37%	-98.05%	-98.16%	-98.69%	
CD4	700	1300	664.5				586	715	844	805	-11.81%	7.60%	27.01%	21.14%	
CD19	300	650	150				131	176	198	232	-12.67%	17.33%	32.00%	54.67%	
Arsenic	0	11.9	48.7				5.02	4.22	5.05	3.65	-89.69%	-91.33%	-89.63%	-92.51%	
Cadmium	0	0.29	0.76				0.38	0.18	0.23	0.15	0.00%	-52.63%	-39.47%	-60.53%	
Antimony	0	0.07	0.12				0.03	0.02	0	0	-75.00%	-83.33%	-100.00%	-100.00%	
Barium	0	2.33	5.87				4.3	2.22	1.81	1.01	-26.75%	-62.18%	-69.17%	-82.79%	
4-Nonylphenol	0	0.42	5.35				4.38	1.02	0.98	0.99	-18.13%	-80.93%	-81.68%	-81.50%	
Atrazine	0	0.02	0.12				0.02	0	0.2	0	-83.33%	-100.00%	66.67%	-100.00%	
Atrazine mercapturate	0	0.02	0.12				0.06	0.02	0.04	0.02	-50.00%	-83.33%	-66.67%	-83.33%	
2-Hydroxyethyl Mercapturic Acid (HEMA)	0	1.7	3.17				1.84	1.63	1.18	0.99	-41.96%	-48.58%	-62.78%	-68.77%	
Ochratoxin A	0	3.83	5.2				4.44	2.51	3.38	2.25	-14.62%	-51.73%	-35.00%	-56.73%	
GenX/HPFO-DA	0	1.04	2.321				1.124	1.182	1.924	1.782	-51.57%	-49.07%	-17.10%	-23.22%	
Perfluorooctanoic acid (PFOA)	0	0.568	0.953				0.41	0.395	0.378	0.402	-56.98%	-58.55%	-60.34%	-57.82%	

RGCC RESULTS

- 2/21/22 RGCC
 - negative.
- 8/26/24 RGCC
 - CD31 – DIM (endo cell membrane Ag)
 - panCK – DIM (epithelial origin cell marker)
- 1/9/25 RGCC
 - negative

LYME RESULTS

- 6/2022 diagnosed with Lyme
- 7/2023 Lyme titer – Positive
- 10/2024 Lyme titer - Negative

Thank you!