## **CASE REPORT**

# **Post-Covid Care: Personal Experience**

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#### Abstract

After apparent recovery from a brutal and hellish bout with Covid-19, new health problems unexpectedly emerged. Among them were a lack of healthy red blood cells (anemia), an extremely high blood urea nitrogen (BUN) level, and a low glomerular filtration rate (eGFR) score. With excellent care from specialist physicians, my blood count is rebuilding, my kidney problems stabilized, and significant lung problems are under control. Not being a medical researcher, I do not know whether my post-covid health problems were triggered by Covid or problems which may arise from advancing age simply revealed themselves. If advancing age, it is considered unusual that so many issues would arise in the same time frame. Either way, this is my story during the twelve months of recovery after active Covid 19.

Keywords: Covid, Anemia, BUN, eGFR.

## **1. Introduction**

Anne and I live in a beautiful retirement community (Leisure World of Maryland) just a few miles from Washington DC. In late November 2023, we travelled to Seoul, Korea and returned on November 27. Everything was normal for several days as we unpacked and recovered from the almost 14-hour Seoul to Washington flight.

Saturday December 2 dawned as a magnificent day for a golf outing. As a golfer who walks for practice rounds, I made a tee time for noon and went to the course to walk and practice. To my surprise, I felt tired as I began to play at hole #1. By the time I reached hole #3, I felt an uncontrollable diarrhea and an unusual fatigue with short breath. I barely completed hole #9 after several stops and had to stop playing. I rationalized that it was a simple case of jet lag. I never considered for a moment that it might be Covid. I had all the vaccines and booster shots as soon as they became available. To my surprise, my initial visit to primary care physician rendered a diagnosis of Covid-19.

My 60-day suffering from Covid-19 is well summarized in Chang (2024). This paper outlines the continuing longer-term issues (my one-year experience) possibly triggered by covid. By the end of January 2024, which marked the 60<sup>th</sup> day of the Covid attack, I felt strong enough to drive around the neighborhood. The excess mucus I was coughing up was slowly disappearing and my appetite was slowly returning. My underlying hypothesis of this article is that as one gets older, needs for health care increase at a geometric rate and changes in one's normal health profile should be followed-up without delay.

# 2. Post Covid Problems

My problem after the initial struggles from Covid has been my inability to restore my pre-Covid level of health as indicated in Table 1 which notes blood test reports on selected dates during 2024.

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Table 1 identified three groups of health problems. First is the anemia as indicated by low scores on RBC (red blood cell), hemoglobin (Hgb), and hematocrit (Hct). Anemia is a condition in which the body does not have enough healthy red blood cells which results in a reduced ability of the blood to carry oxygen to the body's tissues. This causes symptoms like fatigue, weakness, dizziness, and shortness of breath. My symptoms included feeling weak, extreme fatigue, a little irritability, significant loss of appetite, and chronic shortness of breath. The second indicator is a high BUN (blood urea nitrogen) level which can indicate kidney problems. The third indicator is the low eGFR (glomerular filtration rate) score, which measures how well your kidneys are filtering blood. A low eGFR can indicate chronic kidney disease when, left untreated, can result in dependence on dialysis. Clearly, now was the time to seek out specialists in each area.

Test	Reference	Aug.9 2023	Feb.7 2024	Apr.1 2024	May.20 2024	Jul.25 2024	Oct.4 2024
CBC with Differential							
WBC	3.4-10.8	6.00	5.00	6.60	4.40	6.00	5.50
RBC	4.14-5.80	3.30	3.47	3.15	3.25	3.53	3.39
Hemoglobin	13.0-17.7	9.90	9.50	8.60	9.20	10.20	9.80
Hematocrit	37.5-51.0	29.90	30.20	26.80	29.20	31.50	31.50
MCV	79-97	91.00	87.00	85.00	90.00	89.00	93.00
МСН	26.6-33.0	30.00	27.40	27.30	28.30	28.90	28.90
MCHC	31.5-35.7	33.10	31.50	32.10	31.50	32.40	31.10
RDW	11.6-15.4	14.50	14.90	18.80	17.80	16.80	15.80
Platelets	150-450	158.00	128.00	151.00	108.00	121.00	116.00
Neutrophils	n.a.	56.00	64	81.00	68.00	60.00	64.00
Lymphs	n.a.	36.00	25.00	16.00	21.00	28.00	23.00
Monocytes	n.a.	5.00	8.00	2.00	7.00	10.00	9.00
EOS	n.a.	3.00	3.00	1.00	3.00	2.00	3.00
Basos	n.a.	0.00	0.00	0.00	1.00	0.00	0.00
Neutrophils Absolute	1.4-7.0	3.40	2.20	5.30	3.00	3.60	3.50
Lymphs Absolute	0.7-3.1	2.20	1.30	1.00	0.90	1.70	1.30
Monocytes Absolute	0.1-0.9	0.30	0.40	0.10	0.30	0.60	0.50
EOS Absolute	0.0-0.4	0.20	0.10	0.10	0.10	0.10	0.20
Baso Absolute	0.0-0.2	0.00	0.00	0.00	0.00	0.00	0.00
Immature Granulocytes	n.a.	0.00	0.00	0.00	0.00	0.00	1.00
Immmature Grans Absolute	0.0-0.1	0.00	0.00	0.00	0.00	0.00	0.00
Rernal Panel							
Glucose	70-99	117.00	116.00	88.00	91.00	89.00	99.00
BUN	8-27	31.00	42.00	45.00	27.00	46.00	64.00
Creatinine	0.76-1.27	1.77	2.44	1.86	1.70	2.34	2.69
eGFR	>59	39.00	26.00	35.00	40.00	27.00	23.00
BUN/Creatinine Ratio	10-24	18.00	17.00	24.00	16.00	20.00	24.00
Sodium	134-144	143.00	142.00	140.00	138.00	140.00	142.00
Potassiuym	3.5-5.2	4.30	4.60	3.80	4.40	5.40	5.20
Chloride	96-106	109.00	106.00	102.00	108.00	109.00	113.00
Carbon Dioxide	20-24	22.00	24.00	23.00	21.00	20.00	16.00
Calcium	8.6-10.2	8.10	8.40	8.60	8.50	8.30	8.80
Phosphorus	2.8-4.1		3.90	3.80	3.50	4.30	5.00
Albumin	3.7-4.7	3.40	3.50	3.50	3.40	3.70	3.80
<b>B-Type Natriuretic</b>	0-100		613.00				
<b>C-Reactive Protein</b>	0-10	19.00	20.00				
***** March 18,	2023: NT pro	BNP 8400" F	Ref: 0-486 188	88 for those ov	ver 75.		

**Table 1.** Lab Reports on Selected Dates in 2024

# 3. Weekly Visits to Specialists

Upon consultation with our primary care physician, Anne immediately began to spend day and night to research the best specialists who could provide appropriate treatment for anemia, kidney, and lung problems. Visits to doctors' offices during 2024 were: Primary Care (Dr. Ata Motamedi: Jan 5, Feb 9, April 1 & 16 May 28, Aug. 20), Hematologist (Dr. Frederick Min: Jan. 12 & 13, Feb. 9, March 18, April 15 & 22 & 29, May 16 & 18, June 14, July 7, Aug. 8 & 27, Oct. 1, Nov. 7), Nephrologist (Dr. Raymond Bass: Jan 3, July 11, Oct. 10), Pulmonologist (Dr. Steven T. Kariya: March 19, July 30, Sept. 24, Oct. 10, Dec. 6 & 18), and Cardiologist (Dr. James Lee: Feb 21 & 22, April 5, July 29, Aug. 26, Sept. 10, Nov. 20). During the year, I also had routine eye examinations with ophthalmologist Dr. Gordon Lui: (Jan. 31, Aug. 1) who continues to monitor a low degree of macular degeneration in one eye. During this time frame, a hernia that had been previously diagnosed but determined not ready for surgical repair became problematic and surgery was scheduled. (Surgeon Dr. Eric A. Oristian: Feb. 14, March 6, April 22). A routine annual visit was made to my urologist (Dr. Anup A. Vora: Dec. 17). On the advice of Dr. Motamedi (primary physician) I was seen by a Rheumatologist (Dr. Thomas J. Lang: May 31, June 27). Given the fact that there was such a range of issues with vital organs, Dr. Motamedi posited that rheumatoid arthritis might be a causal factor. Fortunately, this was ruled out by Dr. Lang. My doctors' visits during 2024 totaled no less than 43, and my blood tests totaled 18.

During this period, Dr. Bass, nephrologist, was able to stabilize my kidney problems with prescription medicine. Dr. Lee, cardiologist, who led me to an open-heart surgery for removal of a fibroelastoma at Washington Hospital in June 2021 (Martin and Chang 2022), was able to rule out congestive heart failure. Dr. Motamedi, primary care physician, was on guard to make sure that my blood pressure remained at a safe level, and Dr. Min, hematologist, did his part by keeping my anemia problem from getting worse by periodic infusions of iron shots.

Making an initial appointment with specialists can take time before an opening on their calendar. The first opening with Dr. Kariya, pulmonologist, was three months after my symptoms began and Anne began the search for specialty care. We met with him the morning of March 19, 2024 and I was scheduled for a blood test which I took at the lab that afternoon. Shortly after 8 a.m. the morning of March 20, Dr. Kariya called Anne and told her to immediately take me to a hospital Emergency Room as the tests indicated I was going into heart failure due to fluid build-up. He would call ahead and make arrangements for immediate admittance. My kidneys were not functioning well enough to remove excess fluid and waste from my blood stream, thus putting a strain on my heart.

Anne took me to the emergency room at Suburban Hospital and I was quickly admitted to the Hospital. I stayed there for two nights. I returned home in the afternoon hours of March 22. When I came home, my body weight was lowered from 165 pounds to 145 pounds in the two-day span. About 20 pounds of excess fluid had been drained from my body. The fluid accumulation was particularly acute in both legs. I had noticed that my ankles were swollen, but, as a layman, thought "it would go away".

Our story with Dr. Kariya continued into late in 2024. Following a scheduled visit on September 24, he ordered a CT scan which was done on October 3. I still remember what Ms. Leon APRN, said: Since we drained a large amount of water from your lung, let us see what could have been hiding under the water. After reviewing CT scan results that showed white dots called nodules, we had another meeting with Dr. Kariya on October 15, who told us to do PET Scan which was done on October 28. After reviewing results of the PET Scan, Dr. Kariya called Anne on November 4 to tell her to take me to Suburban Hospital again to drain fluid from my lung. Anne was told that I may have a cancer in my lung although she did not divulge that information to me until much later.

This test was done on November 8 at Suburban Hospital as an outpatient. The specimen was sent for testing for the presence of cancer cells. The amount of fluid drained was a half-liter which appeared to me to be a full water glass in a typical restaurant.

On November 14, we had an appointment with Dr. Kariya's office. Ms. Leon welcomed us with the good news that the test was negative. She added that, since it could be false negative, Dr. Kariya ordered a biopsy. While we were waiting for a call from the hospital to schedule a biopsy, I asked ChatGPT: What is the probability of fluid in the lung containing cancer cells? Answer: "The probability of pleural fluid containing cancer cells from a lung nodule depends largely on the cancer type, its stage, the location of the nodule, and the presence of pleural effusion. If cancer has spread to the pleura, the likelihood increases. Cytological examination of pleural fluid will confirm whether cancer cells are present, but the presence of cancer in the fluid is generally more common in advanced stages of cancer". I then changed my question: What is the probability of lung cancer without cancer cells in the pleural fluid? Answer: "The absence of cancer cells in pleural fluid does not rule out lung cancer, but it may decrease the likelihood."

The biopsy was scheduled for 11am on December 16. We arrived around 9 am to process through admission procedures. At around 11am, I was brought to the procedure room and placed on a bed with a big round machine. My body was extensively wired and the doctor gave me a detailed explanation of the procedure. At any moment, I was expecting a feeling of a "small shot" or needle prick in my back. After about 30 minutes, the doctor gave me a surprising verdict. The expected body mass was no longer present--but I have pneumonia. No cancer cell was hiding inside my lung. As soon as we were outside the hospital, Anne called our pulmonologist for an appointment for the next day to advise on the pneumonia diagnosis.

December 17, 2024 dawned bright. Ihad appointments with my urologist at 9:45am, my pulmonologist at 11:15am and with my dentist at 2 p.m. Dr. Vora, urologist, gave me a clean bill of health regarding my prostate and bladder functions. He even suggested that I could schedule my next visit for a two-year period. Pulmonologist, Dr. Kariya, proceeded his usual thorough examination, declaring that he could treat my pneumonia much easier than my now-absent cancer. He then took a sample of throat mucus for further lab testing. Dr. James Linkous, a prosthodontist, graciously worked me into his schedule as I had broken a dental "bridge" that was initially made more than 30 years ago. Anne and I left on January 1, travelling to San Francisco for my economic conference.

#### 4. Conclusion

Upon recovery from brutish Covid-19, my health problems in 2024 emerged to the surface as indicated in a lack of healthy red blood cells, high blood urea nitrogen level, and glomerular filtration rate score. All these problems surfaced following my recovery from active Covid19 late in 2023. Doctors are speculating whether these problems were "latent" but not "active", but triggered by a Covid infection--or are they a natural progression based on the ageing process. With excellent care from specialist physicians, my heart settled, my kidney problems stabilized, and my lung problems are under control. Either way, this is my story during 12 months after recovery from a Covid 19 infection. Now, on January 1, 2025 I feel healthy. On January 1, 2024, I was not sure I would make it my next birthday which would be February 14. I made my 2024 birthday and my 2025 birthday and believe I am finally shaking most of the covid backlash.

#### **5. References**

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\**Dialysis:* A procedure that removes excess fluid and waste products from the blood when the kidneys aren't working properly.