

An Armed Forces Analogy: The Immunologic Consequences of the COVID-19 Mass Vaccination Campaign

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January 17, 2024**

When the SARS-CoV-2 virus invades and threatens the human body, the immune system comes to our defense. It might be helpful to explain this “war” by using an Armed Forces analogy.

But first, a list of acronyms and definitions:

- **Innate immune system** and the **Adaptive immune system**: These are the two main arms of the immune system. The innate arm of the immune system is the first to respond and is relatively non-specific. The adaptive arm is the antibody producing arm and produces pathogen-specific antibodies.
- **NK cells**: Natural Killer cells. These are cells of the innate immune system. They kill virus-infected human cells. They are excellent, powerful, versatile, extremely important “first responders.”
- **Cytokines**: Small proteins that activate, coordinate, orchestrate, and regulate immune cells and the overall immune response.
- **IFNs**: Interferons are an important type of cytokine that quickly create a hostile anti-viral environment that makes it difficult for an invading virus to succeed.
- **RBD**: Receptor binding domain of the SARS-CoV-2 spike protein. The RBD is the part of the spike protein that fits into the ACE-2 receptor site on human cells. The ACE-2 receptor is the “lock” on the human cell, and the RBD is the “key” that opens that lock, thereby enabling the virus to enter and infect the human cell (which the virus needs to do in order to replicate and survive).
- **NAbs**: Neutralizing antibodies. NAbS are made by the adaptive arm of the immune system. They attempt to “neutralize” the virus by attaching to the RBD of the spike protein. When NAbS successfully attach to the RBD, the RBD is not able to physically fit into the ACE-2 receptor (the lock) and therefore is unable to open the lock. This “neutralizes” the virus---i.e., prevents the virus from being able to enter cells.
- **PNNAbS**: Polyreactive non-neutralizing antibodies. These antibodies are produced when the neutralizing capacity of NAbS declines. PNNAbS bind to the SARS-CoV-2 spike protein and are virulence-inhibiting. They help by preventing virus from invading the lungs and other internal organs.
- **SIR**: Steric immune refocusing (SIR). When NAbS lose their neutralizing capacity, they can nevertheless, still bind (weakly and ineffectively) to the RBD. This physically (sterically) “covers” or “masks” the RBD and makes it difficult for the immune system to

“see” the RBD. This forces the immune system to refocus its attention on (and make antibodies against) parts of the spike protein that are distant from the RBD.

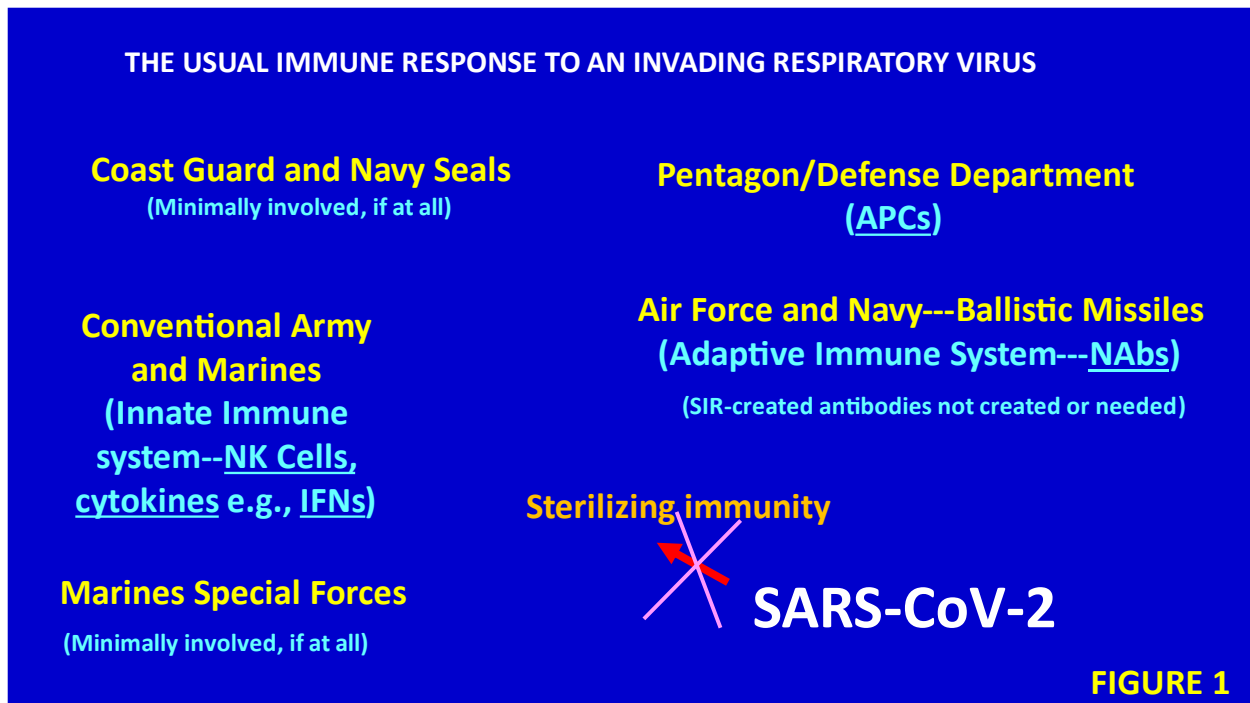
- **SIR-created antibodies:** broadly reactive, weakly neutralizing antibodies created by the SIR phenomenon. They partially compensate for the NAbs’ loss of neutralizing capacity. These antibodies react against more conserved (less variable) parts (epitopes) of the spike protein (parts distant from the RBD).
- **APCs:** Antigen presenting cells. APCs present parts of the virus to the adaptive immune system’s antibody producing machinery. This is a necessary step in antigen-specific (pathogen-specific) antibody production. Without permission and help from APCs, the antibody producing machinery of the adaptive immune system cannot make virus-specific NAbs or SIR-created antibodies.
- **CTLs:** Cytolytic T lymphocytes. These cells are able to kill virus-infected cells. They are different from NK cells. CTLs are activated by APCs.

Now, for the analogy:

- **NK cells** = Frontline ground troops of the Army and Marines
- **NAbs and SIR-created antibodies** = the ballistic missiles made and launched by the Navy and Air Force
- **APCs** = Pentagon/Defense Department that presents instructions and grants permission for the Navy and Air Force to make and launch their ballistic missiles
- **PNNAbs** = the Coast Guard and special Navy Seals who guard the lungs and internal organs with their special virulence-inhibiting PNNAbs
- **CTLs** = special killing forces of the Marines

Think of the NK cells of the innate arm of the immune system as being the conventional frontline ground troops of the Army and Marines; the NAbs and the SIR-created neutralizing antibodies are the long range ballistic missiles made and launched by the adaptive arm of the immune system, which could be thought of as the Air Force and Navy; the APCs are the Pentagon/Defense Department that provide the Air Force and Navy with the specific plans (and permission) for making and launching the ballistic missiles; the virulence inhibiting PNNAbs are the Coast Guard and special Navy Seals that protect the shores of the lungs and internal organs from viral invasion; and the CTLs are special killing forces of the Marines who can be called up in particularly threatening and desperate circumstances.

With the above in mind, here is a schematic diagram (Figure 1, below) of what happens in a usual immune response to an invading acute respiratory virus:

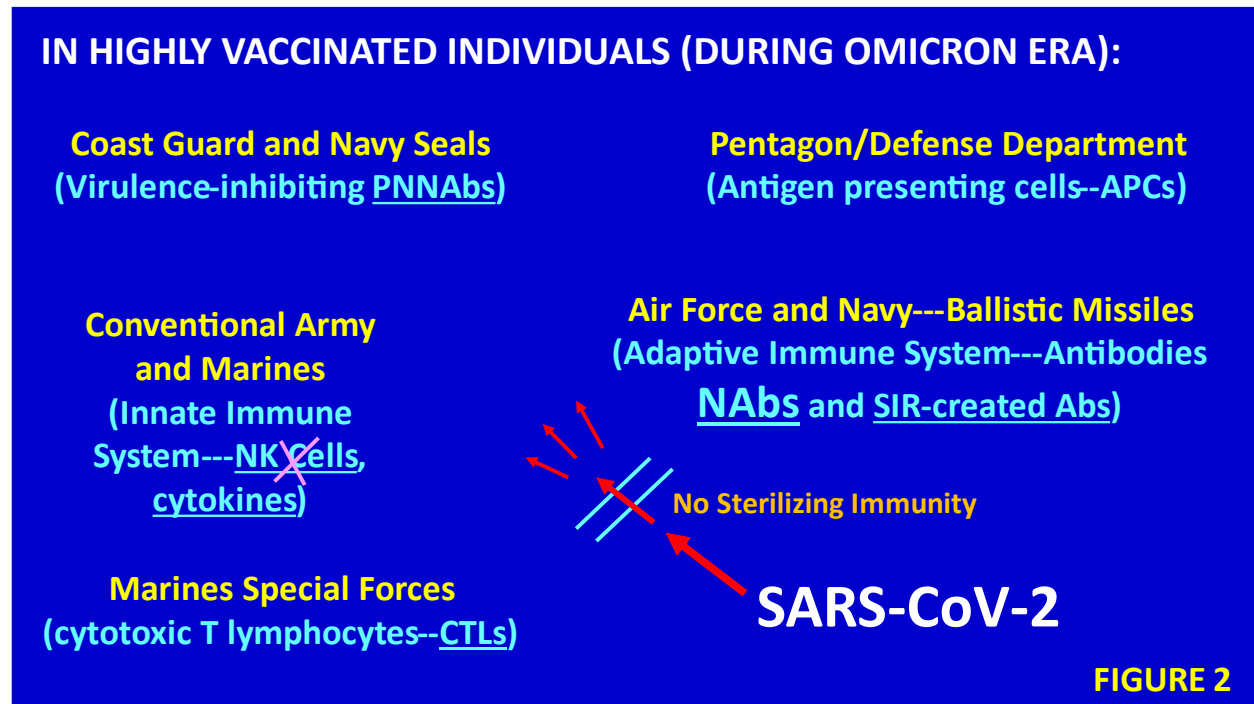


As shown in Figure 1, NK cells (the frontline ground troops of the innate immune system—i.e., the Army and Marines) attack and kill SARS-CoV-2 virus that has infected human cells. Cytokines also help control the viral invasion---by communicating with and coordinating the immune system as a whole, so as to create a hostile environment for the virus. Interferons (IFNs), for example, are particularly important cytokines that quickly create an anti-viral environment that interferes with the ability of the invading virus to survive. The Defense Department at the Pentagon (the APCs) enables the Air force and Navy to produce and launch NABs (ballistic missiles) that are designed to neutralize freely circulating virus that is threatening to invade human cells. SIR-created neutralizing antibodies are not made because they are not needed. The Coast Guard and special Navy Seals are prepared to vigorously enter the war, if needed, but usually they need to participate only minimally, if at all. Likewise, the special CTLs are prepared to vigorously enter the war, if needed, but usually they need to participate only minimally, if at all. The end result of the above immune response is the killing of the virus and the achievement of sterilizing immunity.

The next diagram (Figure 2) depicts the altered immune response of a highly vaccinated individual during the Omicron era:

As shown in Figure 2, the strategy of the Pentagon’s COVID-19 mass vaccination campaign was to rely almost solely on huge quantities of ballistic missiles (NABs) that the Air Force and Navy would be ordered to produce and launch. This strategy resulted in the Army and Marines (NK cells) being sidelined, left out, not even receiving basic training. It’s as if the Pentagon and the adaptive arm of the immune system (Air Force and Navy) ordered the NK cells to “stand down, you need not get involved; we’ve got this.” The Pentagon apparently did not realize that the

enemy (the virus) would quickly learn how to intercept those ballistic missiles, and that supplies of missiles could become difficult to maintain.



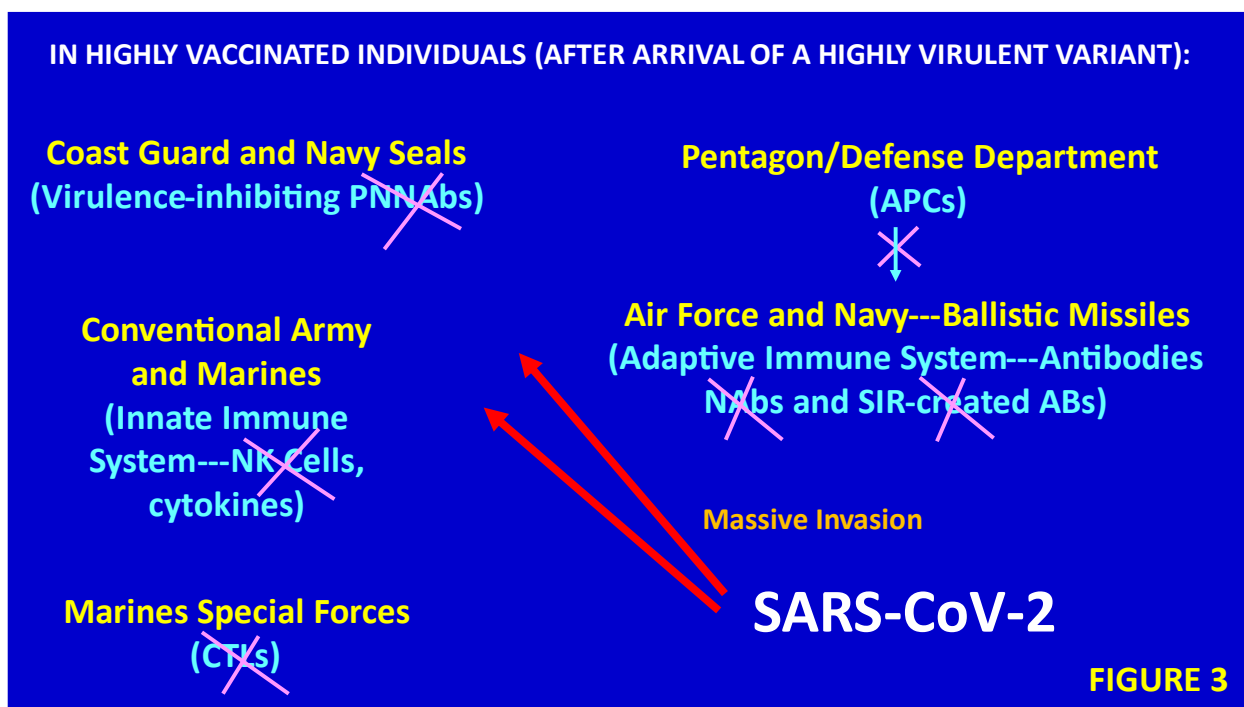
Still looking at Figure 2: When the neutralizing capacity of the NABs declined (because the virus quickly became resistant to these antibodies), the adaptive immune system (Air Force and Navy) adjusted by redirecting its antibody production to the production of SIR-created antibodies, and the Coast Guard adjusted by producing high levels of PNNAbs (i.e., a vigorous Navy Seals operation was mobilized). These adjustments initially worked fairly well. They did not prevent infection and person-to-person transmission (i.e., did not result in sterilizing immunity and, therefore, did not contribute to herd immunity) but provided some protection against severe disease and death (thanks, primarily, to the PNNAbs).

But the Pentagon did not realize that these adjustments would be unsustainable, unstable, and would eventually fail. The Pentagon/Defense Department (APCs) eventually recognized that although the virulence-inhibiting PNNAbs were working well (at least for the time being), the ballistic missiles (the SIR-created Abs as well as the NABs) were failing, and the enemy was winning the war. This prompted the immune system to make a third adjustment---a shift to mobilization and heavy reliance on Special Forces of the Marines (CTLs).

The intense mobilization of the Marines Special Forces (CTLs) has preoccupied the Pentagon/Defense Department (APCs) and hampered their ability to continue facilitating the production of the ballistic missiles (which were increasingly ceasing to work anyway). In other words, the shift to heavy reliance on the Marines Special Forces (CTLs) came at the expense of antibody production. As a result, an ample quantity of these ballistic missiles can no longer be maintained. That is, antibody levels are declining.

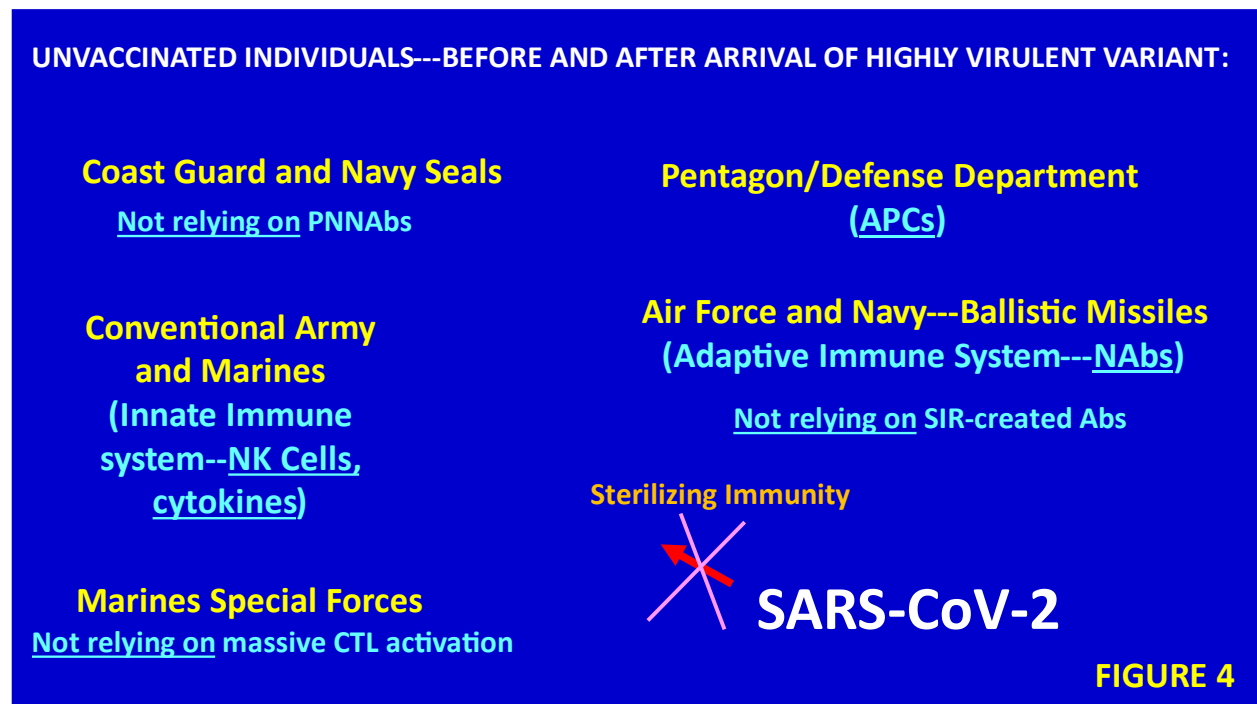
Unfortunately, the enemy (the virus) will soon learn how to completely evade the Coast Guard and the Navy Seals (i.e., a new variant will be able to evade whatever amount of virulence-inhibiting PNNAbs are still present). This will enable the extremely infectious virus to freely and massively invade the lungs and internal organs. This will represent a huge, critically important victory for the virus---the major turning point of the war. Shortly thereafter the Marines Special Forces (CTLs) will dwindle in numbers and strength (for complicated reasons that involve predictable feedback loops).

Ultimately, the above process will leave the highly vaccinated individual with an inadequately trained Army or Marines (inadequately trained NK cells); a derailed Navy and Air Force whose outdated ballistic missiles (antibodies) do not work and have become lower in supply, anyway; a preoccupied and overwhelmed Pentagon/Defense Department that is heavily relying on the Marines Special Forces (CTLs) and is unable to adequately facilitate the Naval and Air Force operations; a Coast Guard and Navy Seals operation whose PNNAbs will soon be unable to prevent invasion; and Marines Special Forces (CTLs) that will ultimately dwindle and cease to be able to help. This will leave highly vaccinated individuals almost totally defenseless against new SARS-CoV-2 variants. That is what will allow the enemy to invade at will, as shown below (Figure 3).



Unlike highly vaccinated individuals, healthy unvaccinated individuals will probably be able to handle a highly virulent variant quite well---because their normal, well-coordinated, well-functioning Armed Forces have been left intact throughout the pandemic. See Figure 4. In particular, and most importantly, the NK cells of their Army and Marines have been engaged

throughout the pandemic and have become increasingly well-trained, practiced, and experienced. These well-trained NK cells will serve the unvaccinated individual very well, even when a highly virulent variant arrives on the scene. The healthy unvaccinated individual's well-functioning Navy and Air force, with the help of well-functioning APCs, will also be able to normally produce and launch NAbs when needed. The immune system of healthy unvaccinated individuals has not been relying on virulence-inhibiting PNNAbs (the Coast Guard and Navy Seals), SIR-created antibodies, or massive activation of CTLs (mobilization of the Marines Special Forces). Accordingly, the healthy unvaccinated individual will not be adversely affected by a new variant that is able to overcome the PNNAbs.



Dr. Vanden Bossche's Analysis and Conclusions in a Nutshell:

The strategy of the COVID-19 mass vaccination campaign has been to rely almost solely on vaccine-triggered production of huge quantities of neutralizing antibodies (NABs) against the spike protein of the SARS-CoV-2 virus. This strategy has sidelined the NK cells of vaccinated individuals. It is as if the NK cells of vaccinees were forced to "stand down," stay out of the way, not participate in the battle against SARS-CoV-2.

Apparently the promoters of this strategy either did not realize or ignored the fact that the virus would easily develop resistance to NABs, such that vaccine-triggered NABs would quickly become ineffective and unprotective. They also failed to realize the importance of NK cell participation and training. Moreover, they arrogantly thought vaccine-induced immunity was superior to naturally acquired immunity.

When the immune system realized that the vaccine-triggered NAbs were failing, it made three specific adjustments to protect the vaccinee. It produced high levels of virulence-inhibiting PNNAbs, which inhibited entry of virus into the lungs and internal organs, thereby protecting vaccinees against severe disease and death. It underwent steric-immune refocusing (SIR) and, thereby, started producing a succession of somewhat protective SIR-created neutralizing antibodies to partially compensate for the ineffective NAbs. And it eventually mobilized CTLs, which kill infected cells. These three heroic adjustments by the immune system have provided considerable protection to vaccinees up to the present time.

However, these three immune adjustments are unsustainable, unstable, and will eventually fail. The levels of PNNAbs and SIR-created antibodies will drop and, for complex reasons, the CTLs will diminish in number and activity.

Furthermore, the virus will ultimately develop resistance to the PNNAbs that remain. When this happens, the virus will be able to easily invade the lungs and internal organs, thereby causing severe disease and possible death.

Since the vaccinee's NAbs have long ago failed; since the three immune adjustments will ultimately fail; and since the vaccinee's NK cells have been sidelined and have gone untrained; vaccinees will soon be defenseless against SARS-CoV-2. Soon, a variant that is resistant to the virulence-inhibiting PNNAbs will be able to easily invade the lungs, will be naturally selected, and will cause severe disease and even death.

At that point we will see a large number of hospitalizations and deaths among highly vaccinated individuals, particularly in highly and rapidly vaccinated countries.

Healthy unvaccinated individuals will fare much better. They have not been depending on high levels of PNNAbs, SIR-created antibodies, or massive activation of CTLs. The innate and adaptive arms of their immune system have remained intact. In particular their well-trained, well-practiced innate immune system (e.g., NK cells) will likely be able to handle new variants well, including the new variant(s) that will be highly virulent when contracted by highly vaccinated individuals.

For nearly three years Dr. Vanden Bossche has repeatedly warned us about the COVID-19 mass vaccination campaign and where it would lead. In particular, he emphasized that implementation of a mass vaccination campaign in the midst of an active pandemic would result in the natural selection and dominant propagation of a vast array and succession of increasingly infectious "immune escape variants" and would ultimately lead to the emergence, natural selection, and dominant propagation of a highly virulent variant(s) that would cause severe disease in highly vaccinated individuals.

But the Pentagon and the Joint Chiefs of Staff have not listened, nor have the Navy or the Air Force or the President or the US COVID-19 Task Force or the CDC, NIH, WHO, health departments, the medical profession as a whole, or most politicians, and certainly not the

pharmaceutical industry. These “leaders” have led us down a very dangerous path. Their misguided COVID-19 mass vaccination campaign has, predictably, prolonged the pandemic and made it far more dangerous. Their mass vaccination campaign will result in far more cumulative COVID-19 deaths than would have cumulatively occurred in the absence of such a campaign. To this day they are still promoting further COVID vaccination, even of children!!, and falsely blaming the prolongation of the pandemic on the unvaccinated and under-vaccinated.

Regarding the question, “What can we do now to give us the best chance for a good outcome?” please see the following article:

In Anticipation of a Highly Virulent SARS-CoV-2 Variant: An ADDENDUM

<https://notesfromthesocialclinic.org/in-anticipation-of-a-highly-virulent-sars-cov-2-variant-an-addendum/>

Acknowledgements: This essay was inspired by Dr. Philip McMillan’s idea and desire to have Dr. Geert Vanden Bossche’s COVID-19 analysis expressed in a way that non-medical people could more easily understand. Philip thought an Armed forces analogy might be helpful. And this essay is informed by Geert’s indefatigable and generous efforts to help all of us to grasp the essence of the complex immunology, virology, vaccinology, and developmental biology that is dynamically transpiring before us.

For further reading and viewing, consider the following:

Video-presentation: *Clinical Implications of Geert’s Predictions*

<https://www.youtube.com/watch?v=UAbICGtVzVo>

The General’s Memos—Simplified

<https://notesfromthesocialclinic.org/the-generals-memos-simplified/>

The General’s Memos---Complicated

<https://notesfromthesocialclinic.org/the-generals-memos-complicated/>

An Open Letter to Physicians and Physician Organizations

<https://notesfromthesocialclinic.org/an-open-letter-to-physicians-and-physician-organizations/>

Eight Fundamental Principles of Science and Medicine

<https://notesfromthesocialclinic.org/eight-fundamental-principles-of-science-and-medicine/>

A Brief Summary of the COVID-19 Pandemic

<https://notesfromthesocialclinic.org/a-brief-summary-of-the-covid-19-pandemic/>

How Has the COVID-19 Mass Vaccination Campaign Made the Natural Selection and Rapid Propagation of a HIGHLY Virulent Variant Highly Likely?

<https://notesfromthesocialclinic.org/2315-2/>

THE ROOT CAUSE OF THE COVID-19 PANDEMIC AND ITS MISMANAGEMENT

<https://notesfromthesocialclinic.org/the-root-cause-of-the-covid-19-pandemic-and-its-mismanagement/>

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