My Journey Through the Shadows of Death

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I suffered a massive stroke on 5 April 2021. A stroke in the **occipital lobe** often results in vision problems since this area of the brain processes visual input from the eyes. A stroke occurs when the supply of blood in the brain becomes blocked by either a clogged or burst artery. When a blood clot clogs an artery in the brain, it's known as an **ischemic stroke**, which accounts for 87% of all strokes. I suffered an ischemic stroke. The stroke affected my vision in two ways (homonymous hemianopia and alexia without agraphia).

Alexia without Agraphia. Alexia refers to inability to read or understand written words. Agraphia refers to the inability to communicate through writing. Therefore, an occipital lobe stroke may impact a patient's ability to read or understand word by looking at the word – it's a visual problem, not a language problem.

Homonymous hemianopia is a visual field defect involving either the two right or the two left halves of the visual fields of both eyes. It is caused by lesions of the retrochiasmal visual pathways, i.e., lesions of the optic tract, the lateral geniculate nucleus, the optic radiations, and the cerebral visual (occipital) cortex. I lost vision on my right side.

Alexia without Agraphia.

After the stroke, I was in the hospital for a week and a half then I returned home. I went to two classes of Physical and Occupational Therapy on 20 & 27 April and nineteen classes of Speech Therapy from 27 April to 30 June. At that time it was determined that I was no longer progressing and those classes came to an end. My wife said that the Speech classes were productive and I made progress during this period.

Although I do not recall the word Aphasia being brought up in this therapy, it was listed in the class documents. I would describe my aphasia in the following manner.

Immediate after my stroke, I suffered from Receptive Aphasia combined with Expressive Aphasia. I was able to break these traits apart by learning how to read again within the first four days after the stroke. After that transition my Receptive and Expressive Aphasia took a back seat and my Anomic Aphasia became visible and the primary deficit that remained. It took great effort to make this transition. I accomplished this by forcing myself to read a simple three-letter word. That effort took me around twenty minutes. But once I broke this loose, I was able to read

written language again and this ability improved quickly. Getting my ability to read back was a godsend to the recovery process. It gave me the depositories of written knowledge back.

In a pilot study, Godecke et al found that daily aphasia therapy in early stroke, that is, mean 3 days post stroke (dps), resulted in improved communication outcomes in moderate to severe aphasia.[a]

Aphasia is typically the most severe immediately following a stroke. The biggest improvements usually happen in the first several months after aphasia is diagnosed. It is written that after a stroke, your brain uses neuroplasticity to rewire itself and rebuild connections that will help language improve. Some improvement is called "spontaneous recovery," meaning that the brain is healing itself on its own. This type of recovery happens the most dramatically in the first few months after a stroke.

Receptive Aphasia is also referred to as Wernicke's aphasia or "fluent aphasia". Receptive Aphasia is a type of aphasia in which individuals have difficulty understanding written and spoken language. Individuals demonstrate fluent speech, which is characterized by typical speech rate, intact syntactic abilities and effortless speech output. They may produce a large amount of spoken words without much meaning. As a result, what they tend to say can be very confusing and generally doesn't make a lot of sense. This is a relatively common form of aphasia. (I would probably define this as a lack of word knowledge, which can cause a person to substitute many words to describe a simple thought.)

Expressive aphasia occurs when the primary difficulties involve spoken language expression and written expression. The speech of a person with expressive aphasia contains mostly content words such as nouns, verbs, and some adjectives. Expressive aphasia is also known as Broca's aphasia. Along with expressive aphasia, it's also possible for someone to overlap with other types of aphasia. For instance, receptive aphasia involves difficulty with comprehension. If someone with expressive aphasia also overlaps with receptive aphasia, they may have difficulty with expression and some difficulty with comprehension, too.

Anomic aphasia is one of the milder forms of aphasia. The term is applied to persons who are left with a persistent inability to supply the words for the very things they want to talk about. People with this kind of aphasia struggle to find words, especially names of objects or words that describe actions. To get around this problem, they often use several words to explain what they mean or non-specific words like "thing" instead. Anomic aphasia goes by several other names, like anomia, amnesic aphasia, and anomic dysphasia. People with this language disorder often feel they have words on the tip of their tongue. They can still otherwise speak fluently and grammatically correctly. They may have particular trouble with nouns and verbs. Anomic aphasia is known as a non-focal brain

disease, meaning it isn't always caused by obvious damage to a specific region of the brain.

Anomia is a symptom of all forms of aphasia, but patients whose primary deficit is word retrieval are diagnosed with anomic aphasia. Some level of anomia is seen in all of the aphasias. Individuals with aphasia who display anomia can often describe an object in detail and maybe even use hand gestures to demonstrate how the object is used, but cannot find the appropriate word to name the object. Patients with anomic aphasia have relatively preserved speech fluency, repetition, comprehension, and grammatical speech.

Anomic aphasia can cause the following traits. People with word selection anomia can recognize objects but usually can't come up with the name, even with prompting. For example, if somebody with word selection anomia saw a pencil, they would know that you can use it to write but wouldn't know what it's called. People with this form of anomic aphasia can't produce the name for an object. However, they may feel like the word is on the tip of their tongue and may recognize the correct word with cueing.

In general, most people when they assess the impact of strokes are on the OUTSIDE LOOKING IN. Strokes are described from the perception of doctors, nurses and other medical staff. But my perception is a little different. I am on the INSIDE LOOKING OUT. My perception of Aphasia is that of the patient, the person who has first hand knowledge of Aphasia because it was burned into my flesh, soul and spirit.

I have described what happened to me personally after my stroke. I have a different perspective of the condition. So I will try to provide some clarity and insight.

After my stroke I forced myself to regain the ability to read written language. This is something that I lost from the brain damage to my brain. This was a Herculean task. It took me 20 minutes to read the three letters that formed a simple word. From that effort, I was rewarded by opening up the floodgates. It dramatically altered the structure of Aphasia within my brain.

So I will assess the change from the inside looking out. I will describe my stroke from the perspective of ME.

To begin with I will break down my stroke apart into these three types"
1 = Receptive Aphasia symptoms (lost my ability to understand)
2 = Expressive Aphasia symptoms (lost my ability to communicate)
3 = Anomic Aphasia symptoms

Right after my stroke I found it difficult to speak verbally because I lost my **knowledge** of about 99% of my words. And the only words I remembered were the words I rarely ever used. I lost all my simple words like cat and dog. Later as I started to begin to speak again, I would say a few words but then I came across a word I forgot and I would freeze in mid sentence. My conversation would go quiet as I tried to remember that particular lost word. Because of this, I would try to fill in the gap (a word that was no longer inside my brain) by using the words I still remembered. As a result, I would try to say other words to convey the thought. I would say 10 or 20 different words to replace the single simple word that was no longer there. But combining these words made it extremely difficult for other people to understand what I was trying to say. NO ONE UNDERSTOOD. So I guess that if I did not break this loss, I would probably have just given up and digressed into a state of silence.[2]

Alone in my hospital room, I would try and read the letters written on the walls. Letters broke apart right before my eyes and assembled into an entirely different alphabet system. This was a system I couldn't read or understand. As a result I lost my ability to read. I also lost my knowledge of written words. There is one word for describing the effects of trying to read after a stroke. It was SPOOKY.[1]

I tried to read a simple word. It was a three-letter word on the wall of my hospital room. I spent 20 minutes trying to read this word, letter by letter. It took me that long to read it and it was a massive effort on my part to do this. But I finally succeeded. Once I broke this lose, I began to correct my Aphasia. A week later, my speed increase and a similar effort took only about 2 minutes. A few weeks later, I was down to a minute. In general, people do not read words one letter at a time but they read the entire word, all the letters at once. So around a month or two later, I began building this ability back. Currently I am at around the 8th grade level in reading skill. I am still a little bit slow and the process of reading is still a little difficult and tiring.[3]

This process was like opening the floodgates. Once I began to read again, I made vast improvement very quickly until the process slowed down and stopped a few months after the stroke. During that time I gained about 80 percent of my words back.[3]

One of the interesting things about the stroke was that I lost my ability to read but not my ability to write. These two skills are stored in different regions of the brain. This created many interesting situations. For example, I wrote specific detailed instructions on how to take my medicines, but because I could not quickly read what I had written, it took me around 6 months later to realize that I was taking some of my medications at the wrong time of day.[1, 2]

Initially after my stroke I lost around 99 percent of my words. It is very difficult to communicate verbally with someone when you lose your words. In addition the words that I lost were the simple words, the most common words. The words that

remained were the words that I rarely ever used. For example, I remembered the word *Supercalifragilisticexpialidocious* used in the film Mary Poppins. That one word survived. But if all you can say are these rarely used words, it is hard to talk and communicate effectively.[2]

So at the present time, I have gained most of my words back and can carry on a verbal/written conversation fairly well. Providing a little more detail I will compare my word knowledge immediately after the stroke (around 1 percent) to my current capability (around 80 percent). I lost all my names of people. I remember working very hard during the first week trying to remember my name. I spend a day working on this and finally I succeeded. The next day I began working on remembering my wife's name. Then I worked on the names of my two daughters, their husbands and my five grandchildren. So after around a week of hard effort, I decided that this was all I needed, so I stopped the process and called it a success.[2]

I lost many of my common words. For example, the words cat and dog. I went around for almost 6 months calling my cat a dog and calling my dog a cat. "Here kitty, kitty". It was embarrassing for my dog. Another area was in my numbers. Numbers were always my strong suite. Before my stroke, I paid all the bills and wrote all the checks in my family. But after my stroke, when I tried to pay bills, I would write down the wrong numbers on my checks. As a result, I had my wife verify all my checks that I wrote when I paid the bills. For the most part, I believe I have recovered from my problem with numbers.[3]

Another area of words that I lost was the name of foods and drinks. After my stroke, my wife decided to make changes to my diet. I would come across some foods still remaining on the shelves of our kitchen. These were items that got left behind. I would tell her, "look what I found, I think I liked this". She would say, "No, no, you didn't really like this." And I would say, "I am sure that I liked this and it was yummy." I said this in a lot of humor, as she took the item and buried it someplace else where I would not find it again.[3]

In general, I permanently lost many simple, everyday type words. The names of various foods, drinks, animals, plants, streets/cities/states/countries, people, and tools. I would estimate that I lost around 99 percent of my words immediately after my stroke and recovered around 80 percent of these words back quickly within the first two or three months after the stroke. But the rest I will have to learn all over again. I will have to use each of these words around 10,000 times to relearn each one.[3]

The Bottom Line – Gaining my ability to read the written language again within the first four days after my stroke was a massive progression towards my recovery.

Homonymous hemianopia

As a result of the stroke, I suffered several levels of vision loss. It affected my eyesight in a variety of ways. In my case, the visual field defect involved my right half of the visual fields of both eyes.

This loss involved several levels in my brain. Correcting one level only revealed another level and solving that level revealed a third level of damage. It was like a maze buried inside of a maze buried inside another maze. And even though I successfully traveled across several mazes, I have not yet reached the final end – full vision recovery. It is still a work in progress.

Part 1 – The Beginning

I suffered several levels of vision loss. So I will begin with Level 1, at the beginning. In my own words, after my stroke my right eye decided to go on vacation. It always wanted to be my left eye and now was it had the perfect opportunity. As a result I had two left eyes but no right eye. Essentially I was completely blind on my right side.

In the second half of my hospital stay, when I was moved to the second floor, the medical staff assessed the problem and proceeded to treat my right side blindness. They covered my left eye (good eye) with an eye patch for 5 hours per day. As a result, my right eye no longer knew which way to look and began moving back to its original right side. So after four days, I had two eyes again, one on the left and one on the right.

And I thought I was cured. But I was NOT. So it was back to the drawing board.

Part 2 – The Second Maze

On 4/27/2021, around 3 weeks after my stroke, I visited my optometrist and underwent an extensive series of eye tests. The results showed that I lost my right side vision in both eyes. Later my daughter gave me a device designed for young children. It was by a company called “ipidipi toys”. It was called a Spinning Light-Up Wand - Rotating LED Toy

It was designed as a sensory toy for children. The mesmerizing motion of the lights within the **IPIDIPI light up wands** for kids. This device created an array of very bright colored spinning lights that circled inside a clear ball. It allowed me to see in real time my stroke vision loss.

I used the **ipidipi toy light up wand** for around 15 minutes a day to stretch my eyeballs into the DARK ZONE, (the dark area of my vision sight) on my right side. After one month of repeating the process of stretching my vision into the dull dark zone of light, my vision began to move. In two days time, my zone of darkness on my right side suddenly disappeared and carried a bright light (equal to the brightness on my left side).

This vision change occurred at the end of the second month after my stroke. I witnessed a dramatic improvement in my vision. It was almost like I got my eyesight back. But this was not the case because the results from additional optometrist tests showed no improvement.

So what changed? To this day I still do not know. Later I found that the eyes have two levels of vision (very detailed forward vision and less sensitive side vision). Therefore I theorized that I was able to bring my side vision back online.

A friend of a friend also suffered a stroke about a month after mine. The stroke affected him in a similar manner as mine. He followed the details of my vision recovery and experienced a similar result. When he visited his optometrist after his vision change, his doctor said, "I don't know what you did, but just keep doing it."

Special Sunglasses

As the months went by, winter came to an end and sunny skies began to shine outside. Somehow I had destroyed my old pairs of prescription eyeglasses. But I had sunglasses left on the shelves. So I began to substitute these glasses. But it took me awhile to realize these were very special sunglasses. They incorporated one-way lenses. I could see out but no one could see in. Also these glasses allowed most of the light to pass through the lens without losing their brightness. As a result, I could even wear these glasses indoors. They were almost magical. These are the same types of glasses that policeman wear in their vehicles.

These glasses allowed my eyelids to remain fully open. This maximized the image. I underwent another round of stretching the eyeballs. But this time my focus was from the center part of my vision field. I focused on the centerline and stretched my vision to the right side of the inner vision line. This gave me a very crisp level of vision and the light reduction allowed me to exercise the inner visual field for longer periods of time.

Locust Wars

A few months after my stroke, we were invaded. My small orchards of trees were about to be destroyed by an invasion of locust. Within my orchard were several American chestnut trees, and I decided that even though I was severely damaged by the stroke, it was my duty to GO TO WAR.

The American chestnut tree was one of the most prolific trees in the northeast regions of the U.S. around a hundred years ago. But because of blight, millions and millions of these trees died off to the point of extinction. [In the first half of the 20th century the blight from Southeast Asia killed an estimated four billion trees. Cryphonectria parasitica is a parasitic fungus of chestnut trees.] But a very, very small handful was immune and survived the blight. Organizations are trying to restore this great tree back in the U.S. I have around a dozen of these young trees

and I was raising them on my land. But after my stroke, these trees ran up against an invasion of locust. My young trees including my chestnut trees were about to perish. So in my mind, this meant WAR.

For several weeks, I could hear the buzz from the millions of locust. The sound echoed through the woods for several weeks before they finally invaded my little forest. It was a battle of enormous dimensions. On one hand were my small fruit trees that were unable to protect themselves from the invaders. On the other hand were millions and millions of hungry destroyers called locust. I stood in the middle, half blind but willing to wage war to protect my small forest.

At the beginning of the battle, I wore gloves but they were a distraction and I tossed them away and did battle with just my fingers. I would come up behind them when they landed, catch them and break them apart with my bare hands. IT WAS WAR. Sometimes they would land on me and sting and their sting would last for a week. At the beginning of this war, my eyesight was broken and disoriented. I could see my fingertips but it was off target. I think as the war raged each day for several weeks my eyesight became more focused and aliened. So towards the end of this WAR, around a hundred locusts met their fate each hour at my hands. And my almost extinct American chestnut trees lived to see another day.

By going to war with this plague of locust for a month, it dramatically improved my hand-to-eye coordination. And then later in the year, my American chestnut trees produced a first harvest of chestnuts. And my wife and I, my children and grandchildren celebrated roasting chestnuts on an open fire in the backyard.

Maximizing Vision to the Fullest

Beginning on 23 July 2021, I began taking classes at the Indiana University Health, Rehabilitation and Sports Medicine Center. It was a form of Occupational Therapy. The training was conducted by Liz Peterson. This training was done in coordination with Elli Kollbaum at the Atwater Eye Care Center, School of Optometry in Bloomington, Indiana.

Essentially this training was a two-part course in driver's education for stroke victims. Initially they requested that I use a Prism Correction Eyeglasses but at the time I felt that my vision recovery had progressed well beyond these eyeglasses. It was like taking a step backwards. From my perspective, I had a different name for these glasses. I called them Voodoo glasses. These prism lenses gave me little slivers of reflection that allowed a small amount of vision on my far right side. In essence I made the decision that all of this training would be conducted using my normal pair of eyeglasses.

The first part of this training was indoors using an interesting device called the Dynavision.

The Dynavision was originally designed to improve the visuomotor skills of athletes. The device provides accurate eye-hand coordination measures as well as visual and motor reaction times. Visual search, defined as the ability to scan the environment to locate targets and information, is a critical component of visual processing that is often impaired even in mild brain injuries. Disruption of visual search creates asymmetry and gaps in the visual information that a person gathers from the environment.

Using the Dynavision, I was quantitatively able to measure the speed of my stroke-damaged vision. During the period of 28 July to 12 August the vision on my upper right side quadrant saw an improvement from 3.15 seconds to 2.25 seconds. And my lower right quadrant went from 3.30 seconds to 2.43 seconds. During the next few weeks, my speed on my right side dropped below the 2-second mark. My vision speed on my good left side also increased. Sometimes my left side vision speed was below the 1-second range.

After several weeks of using this device, my speed of vision showed that I was capable of driving a vehicle. So I moved on to actual city driving.

Nerves of Steel

The second part of this class was **on road driving**. It was very similar to a driver's education class except it was devised for individuals with vision problems such as stroke victims. Over my lifetime, I had driven over a million miles. Driving was in a way part of my life.

The class was conducted by Liz Peterson from the Rehabilitation and Sports Medicine Center. Throughout the course, we drove through the streets of a mid sized town, Bloomington, Indiana. After an initial hour driving session, I was assessed as capable of entering the program. I went through three driving sessions (1 hour each) and then advanced up a level. The second level was areas with speeds around 30 mph. The third level was areas with speeds around 40 mph. The fifth session brought me up to 55 mph zones. Then in the end, I was taken through a session that contained all the various speed zones. At the time it was determined that had I taken the actual driving test, I would have passed the requirements for a drivers test.

Dance Therapy

Winter was almost upon us, and I figured what better time to stretch my eyesight than dancing to energetic Christmas music. So I spent around an hour per day dancing and stretching my eyesight from the far right to the far left (back and forth, back and forth) in order to stretch my eyesight. I am not sure that it accomplished anything but it really did stretch my eyesight to the maximum.

Eye Cleanup

About a year after my stroke, I decided to clean up my eyes using eye swabs and heat therapy. During the process, they also removed some scratching strands of hair that was scratching my eyelids.

After my stroke, on 1 June 2021, my eyes were examined by Dr. Nisha Kheradiya, an Ophthalmologist. One of the problems identified was that I suffered from DRY EYE. I didn't know if correcting this deficit had anything to do with my lost vision, but I decided to fix this problem anyways.

Dry eye caused me pain. It felt like little slivers of glass were inside my eyes. It was difficult for me to improve my eyesight when I had dry eyes. There are several ways to correct this problem. The way that was used consisted of two parts.

1. I placed a drop of solution in each eye four times a day. The solution is called Systane Lubrication Drops Hydration PF (Preservative Free). Systane makes several different types of solution and this particular one was the one my optometrist recommended for clarity.

2. I placed a heat compress on my eyes for 10 minutes. The heat compress was Bruder Eye Compress Moist Heat. I did this twice per day, once in the morning and once before bedtime. Before I placed the compress on my eyes, I placed it in the microwave and heated it for 20 seconds.

After a month of following this approach, I visited my optometrist and was informed the dry eye problem was healed. There were a few micro pieces of hair in my eyelids. She removed these small hairpieces during the visit. The scratchiness was gone.

The next four pages show my vision loss from the stroke and the recovery that has taken place over the first year.

The first graph shows my left eye shortly after the stroke.
The second graph shows my left eye after one year.

The third graph shows my right eye shortly after the stroke.
The fourth graph shows my right eye after one year.

The right side of each eye has shown some improvement. There is less areas in total blackness. But it still shows that I have a ways to go TO GET BACK TO NORMAL.

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a. Godecke E, Hird K, Lalor EE, Rai T, Phillips MR. Very early post stroke aphasia therapy: a pilot randomized controlled efficacy trial. Int J Stroke. 2012;7:635–644

Central 30-2 Threshold Test

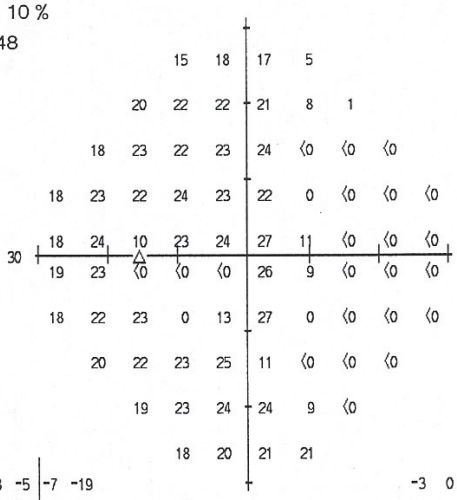
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 8/16 xx
False POS Errors: 0 %
False NEG Errors: 10 %
Test Duration: 05:48

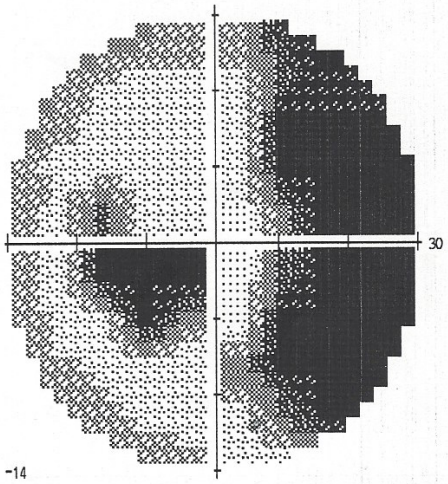
Fovea: OFF

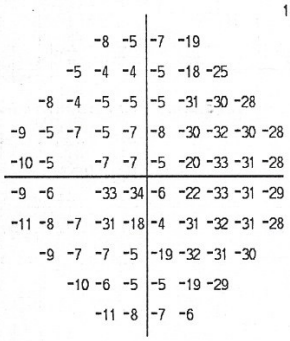
Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Fast

Pupil Diameter:
Visual Acuity:
RX: -5.50 DS -3.50 DC X 98

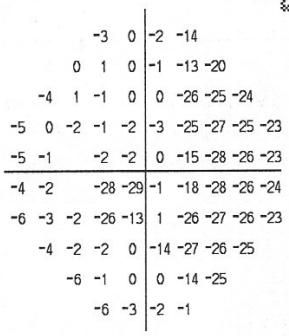
Date: 04-27-2021
Time: 11:40 AM
Age: 72







Total Deviation



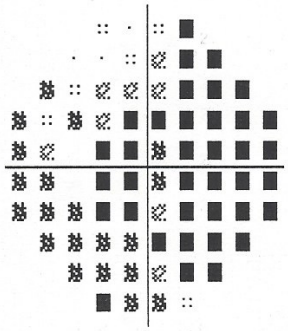
Pattern Deviation

*** Low Test Reliability ***

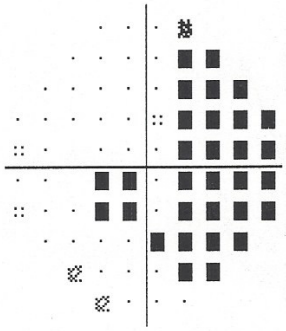
GHT
Outside normal limits

VFI 60%

MD -17.31 dB P < 0.5%
PSD 13.05 dB P < 0.5%



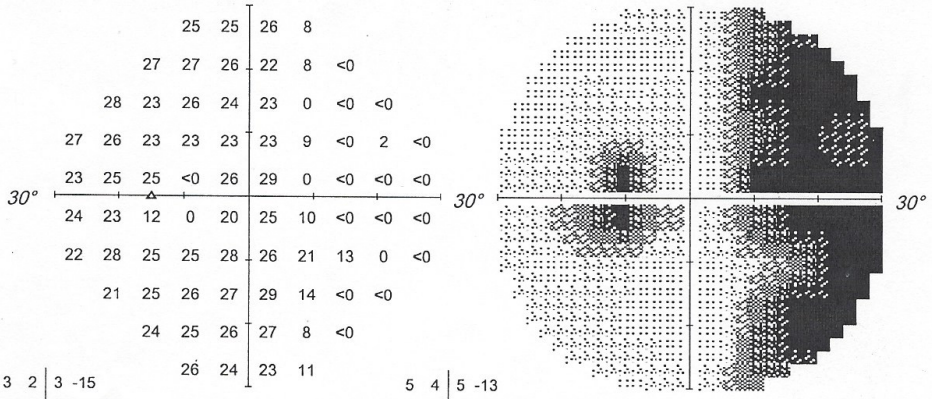
:: < 5%
▒ < 2%
▓ < 1%
■ < 0.5%

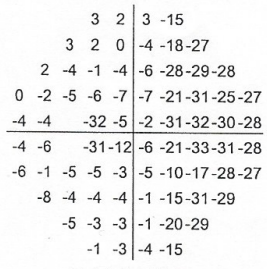


Greene County Vision Centers
1259 A ST NE SUITE 1
LINTON, IN 47441

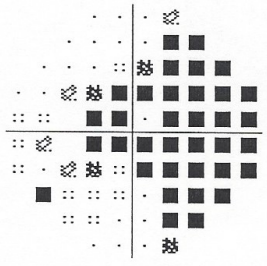
OS Single Field Analysis — Central 30-2 Threshold Test

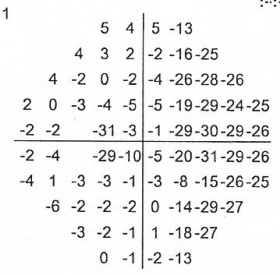
Fixation Monitor:	Gaze/Blind Spot	Stimulus:	III, White	Date:	May 03, 2022
Fixation Target:	Central	Background:	31.5 asb	Time:	3:15 PM
Fixation Losses:	7/20 XX	Strategy:	SITA Standard	Age:	73
False POS Errors:	5%	Pupil Diameter:	3.6 mm *		
False NEG Errors:	13%	Visual Acuity:			
Test Duration:	08:44	Rx: -5.50 DS -3.50 DC X 98			
Fovea:	Off				



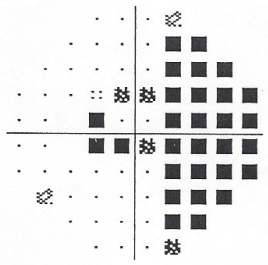


Total Deviation





Pattern Deviation



GHT: Outside Normal Limits

VFI: 65%
MD30-2: -13.25 dB P < 0.5%
PSD30-2: 13.79 dB P < 0.5%

*** Low Test Reliability ***

:: P < 5%
P < 2%
P < 1%
P < 0.5%

Central 30-2 Threshold Test

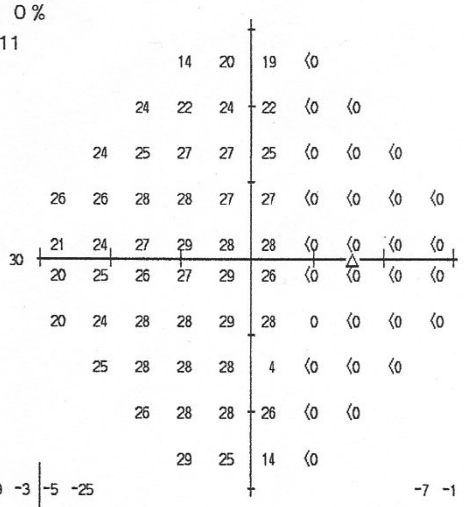
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 0/14
False POS Errors: 0 %
False NEG Errors: 0 %
Test Duration: 05:11

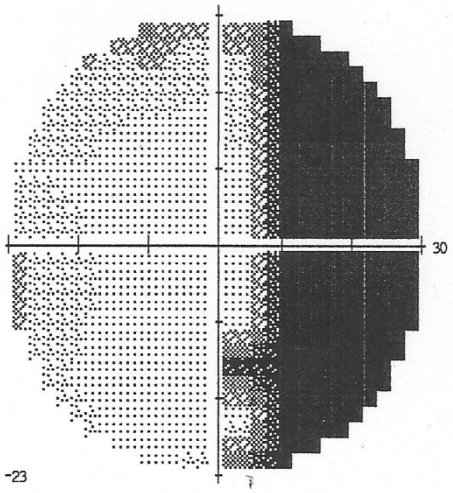
Fovea: OFF

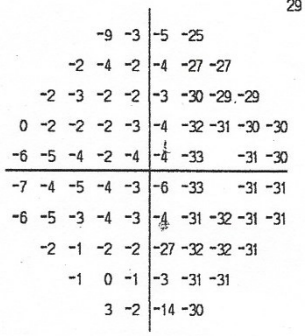
Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Fast

Pupil Diameter:
Visual Acuity:
RX: +0.00 DS DC X

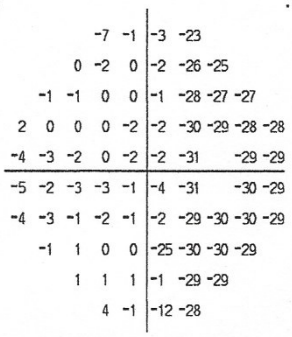
Date: 04-27-2021
Time: 11:32 AM
Age: 72







Total Deviation

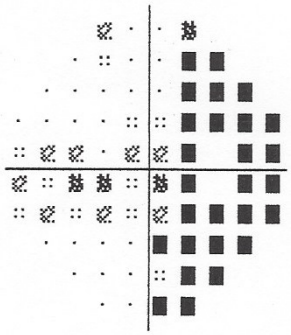


Pattern Deviation

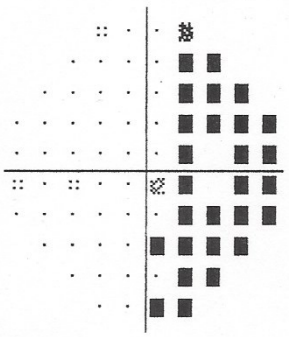
GHT
Outside normal limits

VFI 73%

MD -11.60 dB P < 0.5%
PSD 14.30 dB P < 0.5%



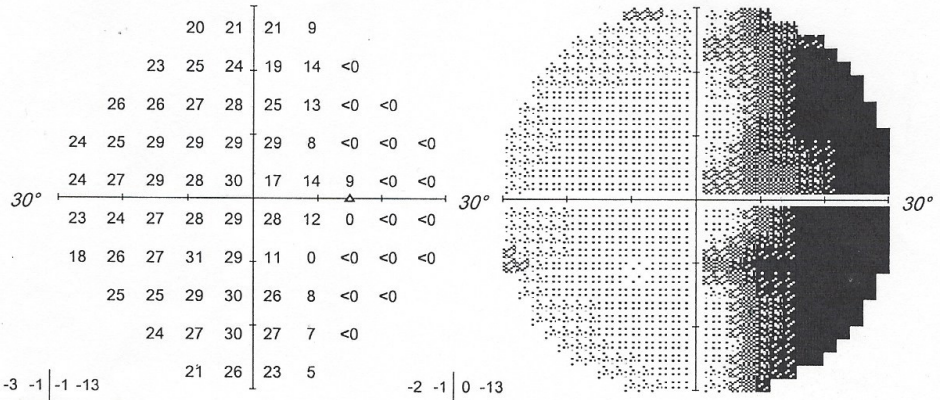
:: < 5%
▨ < 2%
▩ < 1%
■ < 0.5%

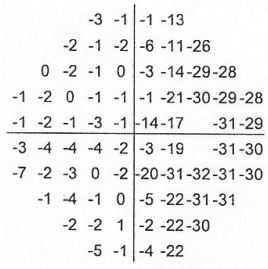


Greene County Vision Centers
1259 A ST NE SUITE 1
LINTON, IN 47441

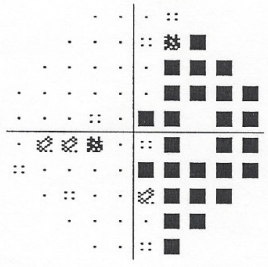
OD Single Field Analysis — Central 30-2 Threshold Test

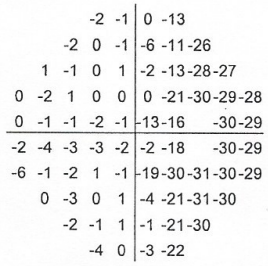
Fixation Monitor:	Gaze/Blind Spot	Stimulus:	III, White	Date:	May 03, 2022
Fixation Target:	Central	Background:	31.5 asb	Time:	3:06 PM
Fixation Losses:	2/19	Strategy:	SITA Standard	Age:	73
False POS Errors:	2%	Pupil Diameter:	3.7 mm *		
False NEG Errors:	0%	Visual Acuity:			
Test Duration:	07:35	Rx: +0.00 DS			
Fovea:	Off				



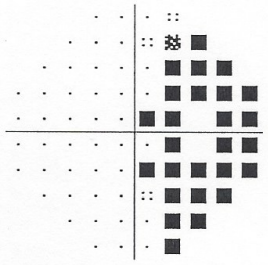


Total Deviation





Pattern Deviation



GHT: Outside Normal Limits

VFI: 76%
MD30-2: -9.79 dB P < 0.5%
PSD30-2: 13.49 dB P < 0.5%

:: P < 5%
P < 2%
P < 1%
P < 0.5%