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A Preliminary Investigation Report of Glaucoma Risk and Four Basic Metabolism Biomarkers using Viscoplastic Energy Model Of GH-Method: Math-Physical Medicine (No. 1076, VMT #473)

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Abstract

This study highlights three main findings.

First, an examination of the time-domain curves for his glaucoma risk and four inputs revealed that his glaucoma risk fluctuated between 2015 and 2024, with an average risk level of 60%. His glaucoma risk was high at 62% in 2015 due to his diabetes and at 63% in 2023 due to aging. In between, the risk percentages fluctuated. Since he was just diagnosed with glaucoma in 2024 and his risk was 63% in 2023, it seems that when his risk percentage reached around 60%, he developed glaucoma condition. In other words, during the past 9.5 years, he has lived with the potential threat of glaucoma.

Over the same period, his body weight and glucose levels improved (moving downward), and his blood pressure and cholesterol remained within healthy ranges.

Second, according to the space-domain viscoplastic medicine theory (SD-VMT) energy distribution ratios:

m1 weight = 29%
m2 glucose = 26%
m3 blood pressure = 26%
m4 cholesterol = 19%

Third, the time-zone energy distribution ratios were:

Y15-Y19 = 45%
Y20 -Y24 = 55%

This indicates that the most significant contribution to his glaucoma risk occurred in the last 5 years.

Introduction

In this article, the author conducted a preliminary study of his glaucoma situation and its relationship with four basic metabolism biomarkers: body weight (m1), glucose (m2), blood pressure (m3), and cholesterol (m4).

There are three commonly seen eye conditions which are related to diabetes and aging: diabetic retinopathy, glaucoma, and cataracts. The author was diagnosed with both diabetic retinopathy and cataracts nearly a decade ago. In a recent meeting with his ophthalmologist to have a peripheral view test, he was diagnosed with glaucoma in his left eye, with an elevated IOP level of 29 mmHg.

- **Normal IOP Range:** 10-21 mmHg
- **Elevated IOP:** Above 21 mmHg
- **Moderately Elevated IOP:** 22-29 mmHg
- **Significantly Elevated IOP:** 30 mmHg and above, often asso-

ciated with a higher risk of optic nerve damage and the development or progression of glaucoma.

Utilizing the metabolism index model the author developed in 2014, he further assessed his risk probability of developing diabetic retinopathy, which included influences from body weight (m1), glucose (m2), blood pressure (m3), cholesterol (m4), and other lifestyle factors. For his glaucoma risk assessment, he placed additional weights in his risk assessment with the following influential factors:

1. **Age:** After the age of 60, he accumulated 1% risk for each additional year.
2. **Ethnicity:** Being an Asian American, he added in a plain 1% extra risk for each year.
3. **Smoking, alcohol consumption, and illicit drug use:** None.
4. **Genetic and Family history:** None
5. **Eye injuries or certain medications:** None

The author utilized his personal health data collected over the past 9.5 years, from January 1, 2015, to May 15, 2024. He then applied the SD-VMT energy model to calculate the Viscoplastic Energy associated with the area of glaucoma and 4 inputs, representing the interaction between four individual influential inputs (m1, m2, m3, m4) and the single output of glaucoma risk. He described this work as a "preliminary investigation" because he is uncertain if m1 through m4 are sufficient inputs for this particular study. He may have omitted some other critical inputs at this early stage of his glaucoma research.

Biomedical or Technical Information

The following sections contain excerpts and concise information drawn from multiple medical articles, which have been meticulously reviewed by the author of this paper. The author has adopted this approach as an alternative to including a conventional reference list at the end of this document, with the intention of optimizing his valuable research time. It is essential to clarify that these sections do not constitute part of the author's original contribution but have been included to aid the author in his future reviews and offer valuable insights to other readers with an interest in these subjects.

Can Glaucoma be Cured?

Glaucoma cannot be cured, but it can be managed effectively with early diagnosis and treatment to slow or prevent further vision loss. The treatment options aim to lower intraocular pressure (IOP) to prevent damage to the optic nerve. Here are the primary treatments:

1. **Medications:** Eye drops or oral medications can reduce eye pressure by decreasing the production of aqueous humor or improving its outflow.
2. **Laser Therapy:** Laser treatments like trabeculoplasty, iridotomy, or cyclophotocoagulation can help improve drainage of the fluid within the eye.
3. **Surgery:** Surgical procedures, such as trabeculectomy or inserting drainage implants, create new drainage pathways for the aqueous humor to lower IOP.
4. **Minimally Invasive Glaucoma Surgery (MIGS):** These newer procedures offer a safer, less invasive option for reducing eye pressure with fewer complications and a faster recovery time compared to traditional surgery.

Regular monitoring and consistent treatment are crucial for managing glaucoma and preserving vision.

Differences in Causes, Symptoms and Consequences of Glaucoma, Cataract and Diabetic Retinopathy

Let us break down the differences in causes, symptoms, and consequences for glaucoma, cataract, and diabetic retinopathy.

Glaucoma
Causes
- Increased intraocular pressure (IOP) due to improper drainage of aqueous humor.
- Genetic factors.
- Eye injuries or conditions.
- Long-term use of certain medications (e.g., corticosteroids).

Symptoms
- Gradual loss of peripheral vision (often unnoticed until significant damage has occurred).
- Tunnel vision in advanced stages.
- Eye pain and redness.
- Nausea and vomiting (acute angle-closure glaucoma).
- Blurred vision or seeing halos around lights.

Consequences
- Irreversible vision loss if untreated.
- Blindness in severe cases.
- Potential damage to the optic nerve.

Cataract
Causes
- Aging (most common cause).
- Diabetes.
- Prolonged exposure to ultraviolet light.
- Smoking.
- Alcohol consumption.
- Use of certain medications (e.g., corticosteroids).
- Eye injuries or inflammation.

Symptoms
- Cloudy or blurry vision.
- Colors appearing faded.
- Glare and halos around lights.
- Poor night vision.
- Frequent changes in prescription glasses or contact lenses.
- Double vision in a single eye.

Consequences
- Progressive vision impairment.
- Potential for blindness if untreated.
- Usually reversible with cataract surgery.

Diabetic Retinopathy
Causes
- High blood sugar levels damaging the blood vessels in the retina.
- Prolonged duration of diabetes.
- Poorly controlled blood sugar levels.
- High blood pressure and cholesterol levels.

Symptoms
- Floaters (dark spots or strings floating in the vision).
- Blurred vision.
- Fluctuating vision.
- Dark or empty areas in the vision.
- Difficulty seeing colors.
- Vision loss in advanced stages.

Consequences
- Progressive damage to the retina.
- Risk of severe vision loss or blindness if untreated.
- Potential for retinal detachment.
- Macular edema (swelling in the central part of the retina).

Summary
- Glaucoma is primarily due to increased intraocular pressure, causing gradual peripheral vision loss and potential optic nerve damage.
- Cataracts are caused by clouding of the eye's lens, leading to blurry vision and difficulty with glare, usually treatable with surgery.
- Diabetic retinopathy results from damage to the retinal blood vessels due to high blood sugar, causing floaters, blurred vision, and potential severe vision loss.

Proper management and treatment of these conditions can help mitigate their consequences and preserve vision.

Differences and Similarities Between Diabetic Retinopathy and Glaucoma?
Diabetic retinopathy and glaucoma are both serious eye conditions that can lead to vision loss, but they have different causes, mechanisms, and treatments. Here are the key similarities and differences between the two:

Differences
Causes
- **Diabetic Retinopathy:** Caused by prolonged high blood sugar levels leading to damage of the small blood vessels in the retina. It is a complication of diabetes.
- **Glaucoma:** Primarily caused by increased intraocular pressure (IOP) that damages the optic nerve. It can also occur without high IOP, such as in normal-tension glaucoma.

Pathophysiology
Diabetic Retinopathy
- High blood sugar levels cause damage to the retinal blood vessels, leading to microaneurysms, hemorrhages, and leakage of fluid.
- This can result in macular edema, where the central part of the retina (the macula) swells and impairs vision.
- In advanced stages, new, abnormal blood vessels form (proliferative diabetic retinopathy), which can bleed and cause retinal detachment.

Glaucoma
- Increased IOP damages the optic nerve fibers, leading to progressive loss of vision, starting with peripheral vision.
- In open-angle glaucoma, the drainage canals are blocked, leading to increased IOP.
- In angle-closure glaucoma, the iris blocks the drainage angle, causing a rapid increase in IOP.

Symptoms
Diabetic Retinopathy
- Often asymptomatic in the early stages.
- Symptoms may include blurred vision, floaters, dark or empty areas in vision, and difficulty seeing at night.
- In advanced stages, significant vision loss or blindness can occur.

Glaucoma
- Often asymptomatic in the early stages, especially in open-angle glaucoma.
- Gradual loss of peripheral vision, which may go unnoticed until significant damage has occurred.
- In acute angle-closure glaucoma, symptoms include severe eye pain, headache, nausea, vomiting, and sudden visual disturbances.

Diagnosis
Diabetic Retinopathy
- Diagnosed through a comprehensive eye exam, including visual acuity testing, dilated eye exam, fluorescein angiography, and optical coherence tomography (OCT). And every time he Wen, but

Glaucoma
- Diagnosed through a comprehensive eye exam, including measuring IOP, visual field testing, optic nerve imaging (OCT), and gonioscopy to examine the drainage angle.

Treatment
Diabetic Retinopathy
- Management of blood sugar levels, blood pressure, and cholesterol.
- Laser treatment (photocoagulation) to seal or shrink leaking blood vessels.
- Intravitreal injections of anti-VEGF drugs or corticosteroids.
- Vitrectomy surgery to remove blood from the vitreous and repair retinal detachment.

Glaucoma
- Medications (Eye Drops) to Reduce IOP
- Laser therapy to improve drainage (trabeculoplasty for open-angle glaucoma) or create a new drainage pathway (iridotomy for angle-closure glaucoma).
- Surgical procedures such as trabeculectomy, drainage implants, or minimally invasive glaucoma surgery (MIGS).

Similarities
Chronic Conditions
- Both conditions are chronic and can lead to irreversible vision loss if not properly managed.

Associated with Diabetes
- Diabetes is a risk factor for both conditions. Diabetic patients are at increased risk for developing both diabetic retinopathy and glaucoma.

Regular Monitoring
- Both conditions require regular eye examinations for early detection and management to prevent progression and vision loss.

Impact on Vision

- Both can significantly impact vision, although in different ways (retinopathy affects central vision, while glaucoma affects peripheral vision initially).

Prevention

- Maintaining good blood sugar control, managing blood pressure and cholesterol, and regular eye check-ups can help prevent or slow the progression of both conditions.

Understanding these differences and similarities can aid in the effective management and treatment of these conditions to preserve vision and quality of life.

IOP Level of Glaucoma

The intraocular pressure (IOP) level typically associated with glaucoma is often above the normal range, which is generally considered to be between 10 and 21 mmHg (millimeters of mercury). However, glaucoma can occur even with IOP levels within this range, which is known as normal-tension glaucoma. Here are the typical IOP levels and their associations:

1. **Normal IOP Range**
- 10-21 mmHg: Considered normal. However, some individuals may develop glaucoma within this range, known as normal-tension or low-tension glaucoma.

2. **Elevated IOP**
- Above 21 mmHg: Considered elevated and can increase the risk of developing glaucoma. This condition is known as ocular hypertension.

3. **High IOP**
- 22-29 mmHg: Moderately elevated. This level warrants further investigation and monitoring for potential glaucoma development.
- 30 mmHg and above: Significantly elevated and often associated with a higher risk of optic nerve damage and the development or progression of glaucoma.

Types of Glaucoma and IOP Levels

1. Primary Open-Angle Glaucoma
- The most common type. Often associated with IOP levels above 21 mmHg but can also occur with normal IOP levels.
2. Angle-Closure Glaucoma
- Can cause a rapid and severe increase in IOP, sometimes reaching levels above 30 mmHg or higher. This is a medical emergency and requires immediate treatment.
3. Normal-Tension Glaucoma
- Occurs despite having IOP within the normal range. The optic nerve damage is due to factors other than high IOP, such as poor blood flow to the optic nerve.

Importance of Regular Eye Exams

Because glaucoma can occur at various IOP levels, regular comprehensive eye exams, including IOP measurement and optic nerve assessment, are crucial for early detection and management of the disease.

Pathophysiological Explanations of Glaucoma's Relationships with Diabetes?

The relationship between diabetes and glaucoma is complex and multifaceted. Here are the pathophysiological explanations connecting these two conditions:

Hyperglycemia and Oxidative Stress

1. Hyperglycemia: Chronic high blood sugar levels, characteristic of diabetes, can lead to a series of cellular and molecular changes.
2. Oxidative Stress: Hyperglycemia induces oxidative stress by increasing the production of reactive oxygen species (ROS). This oxidative stress can damage the trabecular meshwork and the optic nerve, contributing to increased intraocular pressure (IOP) and optic nerve vulnerability.

Microvascular Damage

1. Microangiopathy: Diabetes causes damage to small blood vessels (microangiopathy) throughout the body, including those in the eye. This can lead to impaired blood flow and nutrient delivery to the optic nerve and trabecular meshwork, promoting glaucoma development.
2. Retinal Ischemia: Poor blood supply to the retina can lead to ischemia and the release of vasoactive factors, which can increase IOP and contribute to glaucoma.

Advanced Glycation End Products (AGEs)

1. AGEs Formation: Hyperglycemia leads to the formation of AGEs, which are harmful compounds formed when proteins or lipids become glycated as a result of exposure to sugars.
2. AGEs Impact: AGEs can accumulate in the trabecular meshwork and optic nerve, leading to structural and functional damage. They can also induce inflammatory responses, further contributing to glaucoma.

Inflammation

1. Chronic Inflammation : Diabetes is associated with a state of chronic low-grade inflammation. Inflammatory cytokines can damage the trabecular meshwork and optic nerve, exacerbating glaucoma.
2. Cytokines and Chemokines: Elevated levels of inflammatory cytokines and chemokines can alter the extracellular matrix and cellular functions in the eye, leading to impaired aqueous humor outflow and increased IOP.

Insulin Resistance

1. Insulin Resistance: In type 2 diabetes, insulin resistance can affect various cellular functions, including those in the eye.
2. Impact on Eye Cells: Insulin resistance may lead to impaired cellular metabolism and function in the trabecular meshwork and optic nerve, contributing to increased IOP and optic nerve damage.

Autonomic Dysfunction

1. Autonomic Neuropathy: Diabetes can cause autonomic neuropathy, affecting the autonomic regulation of the eye.
2. Impact on IOP Regulation: Autonomic dysfunction can impair the regulation of aqueous humor production and drainage, leading to increased IOP and glaucoma risk.

Blood-Flow Abnormalities

1. Vascular Dysregulation: Diabetes can cause abnormalities in blood flow and vascular regulation.
2. Optic Nerve Perfusion: Impaired blood flow to the optic nerve can make it more susceptible to damage from elevated IOP, contributing to the development of glaucoma.

Conclusion

The interplay of these pathophysiological mechanisms highlights the increased risk of glaucoma in individuals with diabetes. Regular monitoring and management of both diabetes and eye health are essential to mitigate the risk and progression of glaucoma in diabetic patients.

Why the Intraocular Pressure (IOP) Increased?

Glaucoma is a group of eye conditions that damage the optic nerve, which is crucial for vision. This damage is often caused by abnormally high pressure in the eye, known as intraocular pressure (IOP). If not treated, glaucoma can lead to permanent vision loss or blindness.

Causes of Glaucoma

1. **Increased Intraocular Pressure (IOP):** The most common cause is an increase in eye pressure, which can damage the optic nerve.
2. **Genetics:** A family history of glaucoma increases the risk.
3. **Age:** People over 60 are at higher risk, although it can occur at any age.
4. **Medical Conditions:** Conditions such as diabetes, high blood pressure, and heart disease can increase the risk.
5. **Eye Injuries:** Previous eye injuries can lead to secondary glaucoma.
6. **Long-term Use of Corticosteroid Medications:** These medications can increase the risk when used for extended periods.
7. **Thin Corneas:** Thinner central corneal thickness can be a risk factor.
8. **Ethnicity:** African Americans, Hispanics, and Asians are at higher risk for different types of glaucoma.

Types of Glaucoma

1. **Open-Angle Glaucoma:** The most common type, where the drainage angle formed by the cornea and iris remains open, but the trabecular meshwork is partially blocked.
2. **Angle-Closure Glaucoma:** Occurs when the iris bulges forward to narrow or block the drainage angle.
3. **Normal-Tension Glaucoma:** Optic nerve damage occurs despite normal eye pressure.
4. **Congenital Glaucoma:** Present at birth due to developmental issues in the eye's drainage system.
5. **Secondary Glaucoma:** Results from an injury or other eye conditions.

Regular eye exams are essential for early detection and management of glaucoma to prevent vision loss.

MPM Background

To learn more about his developed GH-Method: math-physical medicine (MPM) methodology, readers can read the following three papers selected from his published 760+ papers.

The first paper, No. 386 (Reference 1) describes his MPM methodology in a general conceptual format. The second paper, No. 387 (Reference 2) outlines the history of his personalized diabetes research, various application tools, and the differences between biochemical medicine (BCM) approach versus the MPM approach. The third paper, No. 397 (Reference 3) depicts a general flow diagram containing ~10 key MPM research methods and different tools.

The Author'S Diabetes History

The author was a severe T2D patient since 1995. He weighed 220 lb. (100 kg) at that time. By 2010, he still weighed 198 lb. with an average daily glucose of 250 mg/dL (HbA1C at 10%). During that year, his triglycerides reached 1161 (high risk for CVD and stroke) and his albumin-creatinine ratio (ACR) at 116 (high risk for chronic kidney disease). He also suffered from five cardiac episodes within a decade. In 2010, three independent physicians warned him regarding the need for kidney dialysis treatment and the future high risk of dying from his severe diabetic complications.

In 2010, he decided to self-study endocrinology with an emphasis on diabetes and food nutrition. He spent the entire year of 2014 to develop a metabolism index (MI) mathematical model. During 2015 and 2016, he developed four mathematical prediction models related to diabetes conditions: weight, PPG, fasting plasma glucose (FPG), and HbA1C (A1C). Through using his developed mathematical metabolism index (MI) model and the other four glucose prediction tools, by the end of 2016, his weight was reduced from 220 lbs. (100 kg) to 176 lbs. (89 kg), waistline from 44 inches (112 cm) to 33 inches (84 cm), average finger-piercing glucose from 250 mg/dL to 120 mg/dL, and A1C from 10% to ~6.5%. One of his major accomplishments is that he no longer takes any diabetes-related medications since 12/8/2015.

In 2017, he achieved excellent results on all fronts, especially his glucose control. However, during the pre-COVID period, including both 2018 and 2019, he traveled to ~50 international cities to attend 65+ medical conferences and made ~120 oral presentations. This hectic schedule inflicted damage to his diabetes control caused by stress, dining out frequently, post-meal exercise disruption, and jet lag, along with the overall negative metabolic impact from the irregular life patterns; therefore, his glucose control was somewhat affected during the two-year traveling period of 2018-2019.

He started his COVID-19 self-quarantined life on 1/19/2020. By 10/16/2022, his weight was further reduced to ~164 lbs. (BMI 24.22) and his A1C was at 6.0% without any medication intervention or insulin injection. In fact, with the special COVID-19 quarantine lifestyle since early 2020, not only has he written and published ~500 new research articles in various medical and engineering journals, but he has also achieved his best health conditions for the past 27 years. These achievements have resulted from his non-traveling, low-stress, and regular daily life routines. Of course, his in-depth knowledge of chronic diseases, sufficient practical lifestyle management experiences, and his own developed high-tech tools have also contributed to his excellent health improvements.

On 5/5/2018, he applied a continuous glucose monitoring (CGM) sensor device on his upper arm and checks his glucose measurements every 5 minutes for a total of 288 times each day. Furthermore, he extracted the 5-minute intervals from every 15-minute interval for a total of 96 glucose data each day stored in his computer software.

Through the author's medical research work over 40,000 hours and read over 4,000 published medical papers online in the past

13 years, he discovered and became convinced that good life habits of not smoking, moderate or no alcohol intake, avoiding illicit drugs; along with eating the right food with well-balanced nutrition, persistent exercise, having a sufficient and good quality of sleep, reducing all kinds of unnecessary stress, maintaining a regular daily life routine contribute to the risk reduction of having many diseases, including CVD, stroke, kidney problems, micro blood vessels issues, peripheral nervous system problems, and even cancers and dementia. In addition, a long-term healthy lifestyle can even "repair" some damaged internal organs, with different required time-length depending on the particular organ's cell lifespan. For example, he has "self-repaired" about 35% of his damaged pancreatic beta cells during the past 10 years.

Energy Theory

The human body and organs have around 37 trillion live cells which are composed of different organic cells that require energy infusion from glucose carried by red blood cells; and energy consumption from labor-work or exercise. When the residual energy (resulting from the plastic glucose scenario) is stored inside our bodies, it will cause different degrees of damage or influence to many of our internal organs.

According to physics, energies associated with the glucose waves are proportional to the square of the glucose amplitude. The residual energies from elevated glucoses are circulating inside the body via blood vessels which then impact all of the internal organs to cause different degrees of damage or influence, e.g. diabetic complications. Elevated glucose (hyperglycemia) causes damage to the structural integrity of blood vessels. When it combines with both hypertension (rupture of arteries) and hyperlipidemia (blockage of arteries), CVD or Stroke happens. Similarly, many other deadly diseases could result from these excessive energies which would finally shorten our lifespan. For an example, the combination of hyperglycemia and hypertension would cause micro-blood vessel's leakage in kidney systems which is one of the major causes of CKD.

The author then applied Fast Fourier Transform (FFT) operations to convert the input wave from a time domain into a frequency domain. The y-axis amplitude values in the frequency domain indicate the proportional energy levels associated with each different frequency component of input occurrence. Both output symptom value (i.e. strain amplitude in the time domain) and output symptom fluctuation rate (i.e. the strain rate and strain frequency) are influencing the energy level (i.e. the Y-amplitude in the frequency domain).

Currently, many people live a sedentary lifestyle and lack sufficient exercise to burn off the energy influx which causes them to become overweight or obese. Being overweight and having obesity leads to a variety of chronic diseases, particularly diabetes. In addition, many types of processed food add unnecessary ingredients and harmful chemicals that are toxic to the bodies, which lead to the development of many other deadly diseases, such as cancers. For example, ~85% of worldwide diabetes patients are overweight, and ~75% of patients with cardiac illnesses or surgeries have diabetes conditions.

In engineering analysis, when the load is applied to the structure, it bends or twists, i.e. deform; however, when the load is removed, it will either be restored to its original shape (i.e, elastic case) or remain in a deformed shape (i.e. plastic case). In a biomedical system, the glucose level will increase after eating carbohydrates or sugar from food; therefore, the carbohydrates and sugar function as the energy supply. After having labor work or exercise, the glucose level will decrease. As a result, the exercise burns off the energy, which is similar to load removal in the engineering case. In the biomedical case, both processes of energy influx and energy dissipation take some time which is not as simple and quick as the structural load removal in the engineering case. Therefore, the age difference and 3 input behaviors are "dynamic" in nature, i.e. time-dependent. This time-dependent nature leads to a "viscoelastic or viscoplastic" situation. For the author's case, it is "viscoplastic" since most of his biomarkers are continuously improved during the past 13-year time window.

Time-dependent Output Strain and Stress of (Viscous Input*Output Rate)
Hooke's law of linear elasticity is expressed as:

Strain (ε: epsilon)
= Stress (σ: sigma) / Young's modulus (E)

For biomedical glucose application, his developed linear elastic glucose theory (LEGT) is expressed as:

PPG (strain) = carbs/sugar (stress) * GH.p-Modulus (a positive number) + post-meal walking k-steps * GH.w-Modulus (a negative number)

Where GH.p-Modulus is reciprocal of Young's modulus E.

However, in viscoelasticity or viscoplasticity theory, the stress is expressed as:

Stress
= viscosity factor (η: eta) * strain rate (dε/dt)

Where strain is expressed as Greek epsilon or ε.

In this article, in order to construct an "ellipse-like" diagram in a stress-strain space domain (e.g. "hysteresis loop") covering both the positive side and negative side of space, he has modified the definition of strain as follows:

Strain
= (body weight at certain specific time instant)

He also calculates his strain rate using the following formula:

Strain rate
= (body weight at next time instant) - (body weight at present time instant)

The risk probability % of developing into CVD, CKD, Cancer is calculated based on his developed metabolism index model (MI) in 2014. His MI value is calculated using inputs of 4 chronic conditions, i.e. weight, glucose, blood pressure, and lipids; and 6 lifestyle details, i.e. diet, drinking water, exercise, sleep, stress, and daily routines. These 10 metabolism categories further contain ~500 elements with millions of input data collected and processed since 2010. For individual deadly disease risk probability %, his mathematical model contains certain specific weighting factors for simulating certain risk percentages associated with different deadly diseases, such as metabolic disorder-induced CVD, stroke, kidney failure, cancers, dementia; artery damage in heart and brain, micro-vessel damage in kidney, and immunity-related infectious diseases, such as COVID death.

Some of explored deadly diseases and longevity characteristics using the viscoplastic medicine theory (VMT) include stress relaxation, creep, hysteresis loop, and material stiffness, damping effect based on time-dependent stress and strain which are different from his previous research findings using linear elastic glucose theory (LEGT) and nonlinear plastic glucose theory (NPGT).

Results

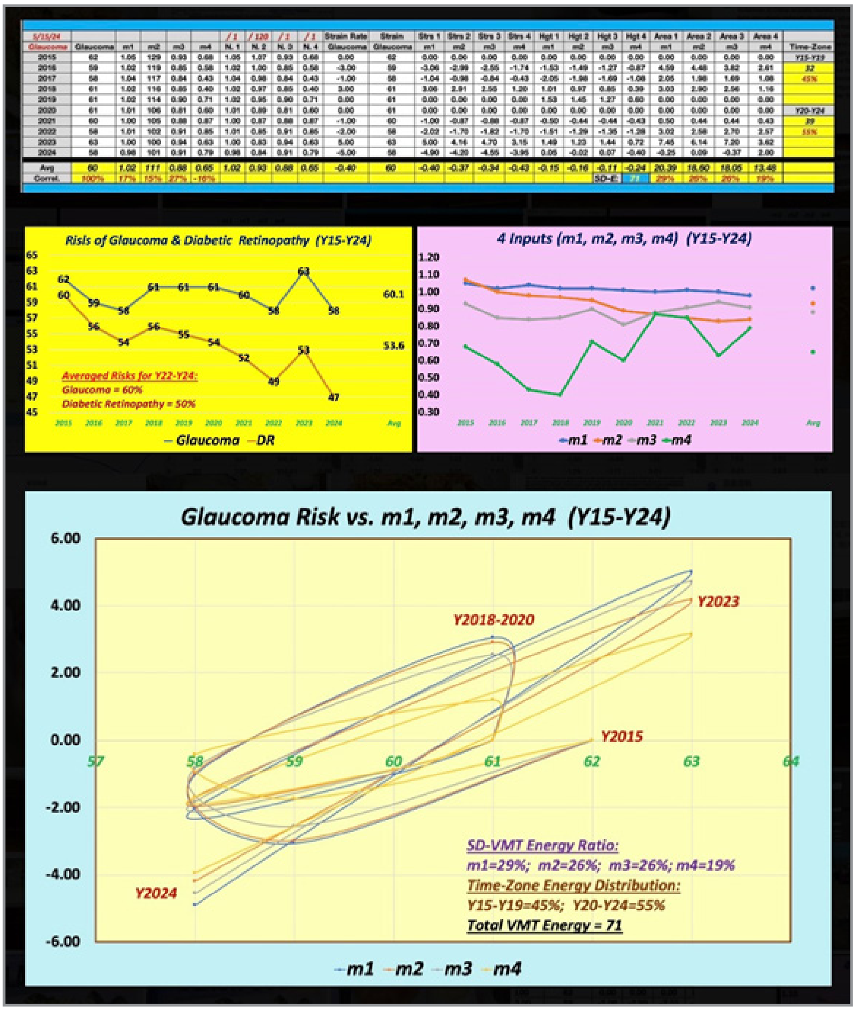

Figure 1: shows the data tables, TD and SD figures of Glaucoma.

References

1. For editing purposes, majority of the references in this paper, which are self-references, have been removed for this article. Only references from other authors' published sources remain. The bibliography of the author’s original self-references can be viewed at www.eclairemd.com.
2. Readers may use this article as long as the work is properly cited, and their use is educational and not for profit, and the author’s original work is not altered.
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