RIGHT TO SCIENCE CLUB

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JOIN OUR
RIGHT TO SCIENCE CLUB
TODAY!

WHAT IS "RIGHT TO SCIENCE"?

Every citizen should have the "Right to Science," wherein he or she can have access to all the medical science advancements in diagnosis and therapy, in time to save his or her life.

WHAT IS THE MODE OF PROVIDING "RIGHT TO SCIENCE"?

RIGHT TO SCIENCE IN THERAPY

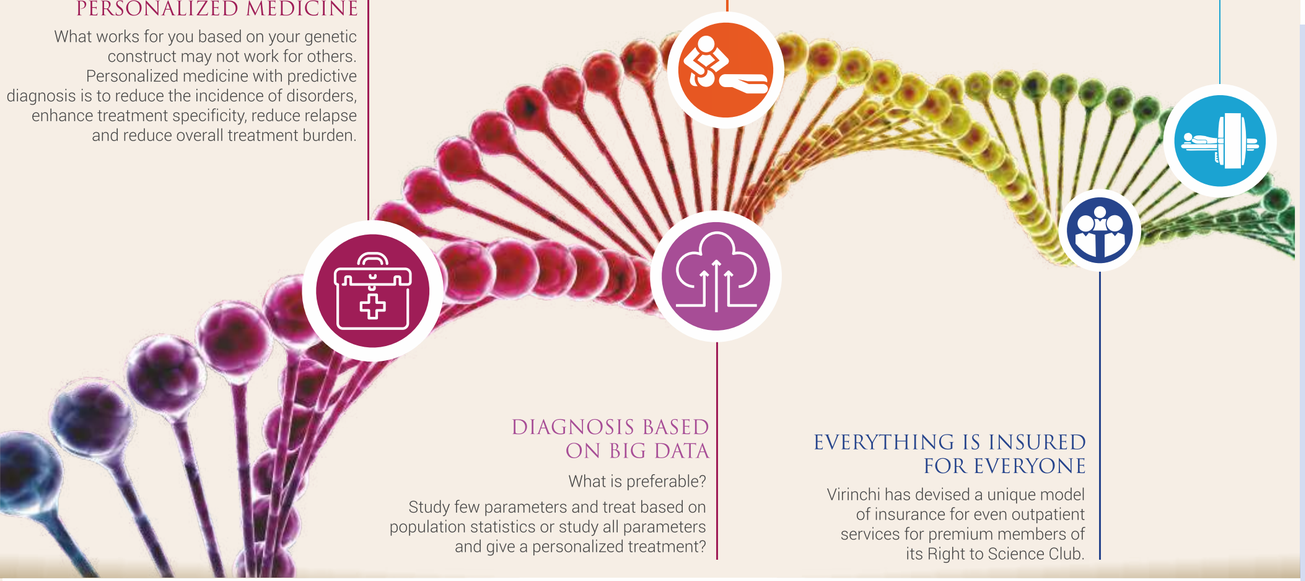
The future is all about stem cell-based therapies**,organ regeneration, adoptive immune therapies, check point inhibition therapies, reconstruction surgeries, gene editing, fully-guided surgeries, implants and transplants, 3D printed skeletal scaffolds, bionic prosthetics, biological prosthetics, and nanotechnology for disease detection, drug delivery and cell / tissue corrections.

EQUIPMENT BASED ON FUTURE SCIENCE

3T fMRI, Dual Energy 128-slice CT scan, IVUS-FFR Cath Lab and Twin Detector Digital X-ray, lab equipment capable of analysing 15,000 bio-markers.

PERSONALIZED MEDICINE

What works for you based on your genetic construct may not work for others. Personalized medicine with predictive diagnosis is to reduce the incidence of disorders, enhance treatment specificity, reduce relapse and reduce overall treatment burden.



DIAGNOSIS BASED ON BIG DATA

What is preferable?

Study few parameters and treat based on population statistics or study all parameters and give a personalized treatment?

EVERYTHING IS INSURED FOR EVERYONE

Virinchi has devised a unique model of insurance for even outpatient services for premium members of its Right to Science Club.

**All therapies are subject to due regulatory approvals.

WHERE CAN YOU GET YOUR "RIGHT TO SCIENCE"?

Your Right to Science can be exercised anytime, from anywhere on your mobile device.

"MOBILE" VIDEO CONSULTATION

Virinchi provides video consultations with doctors via smartphones.

MEDICAL EVENT BOOK KEEPING

Virinchi's mobile app enables each patient to have complete medical history of every test and hospitalization record on the cloud and on the mobile as well, for the individual and his family for their entire lifetime, which they can zip and forward to any doctor for a second opinion.

EVENT HISTORY LOGGING

With the help of wearable medical devices and remotely accessed bed side units, vital clinical features are monitored in real time to provide timely feedback and quick responses in times of critical need and emergency.

HEALTHCARE AS A WELCOME EXPERIENCE

Virinchi is a truly paperless 'mobile-only' hospital with all front office, nursing and ward processes executed completely on tablets.

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WHEN CAN YOU GET YOUR "RIGHT TO SCIENCE"?

From today onwards!

WHO IS PROVIDING YOUR "RIGHT TO SCIENCE"?

Virinchi Hospitals is a 100% subsidiary of Virinchi Ltd., a 25 year old ₹ 500 cr. diversified group with interests in Information Technology, Healthcare, Biotech and Infrastructure development, promoted by Mr. Vish Kompella, an alumnus of IIT Madras, with two listed companies under its ambit viz., www.virinchi.com BSE (VIRINCHIQ 532372) employing about 1000+ IT personnel and www.vivobio.com BSE (511509) employing 200+ biotech scientists. With the opening of its Banjara City Centre Hospital, Virinchi Hospitals will be operating 3 hospitals with 800 beds' capacity in Hyderabad, Telangana.

WELCOME TO YOUR FAMILY HOSPITAL

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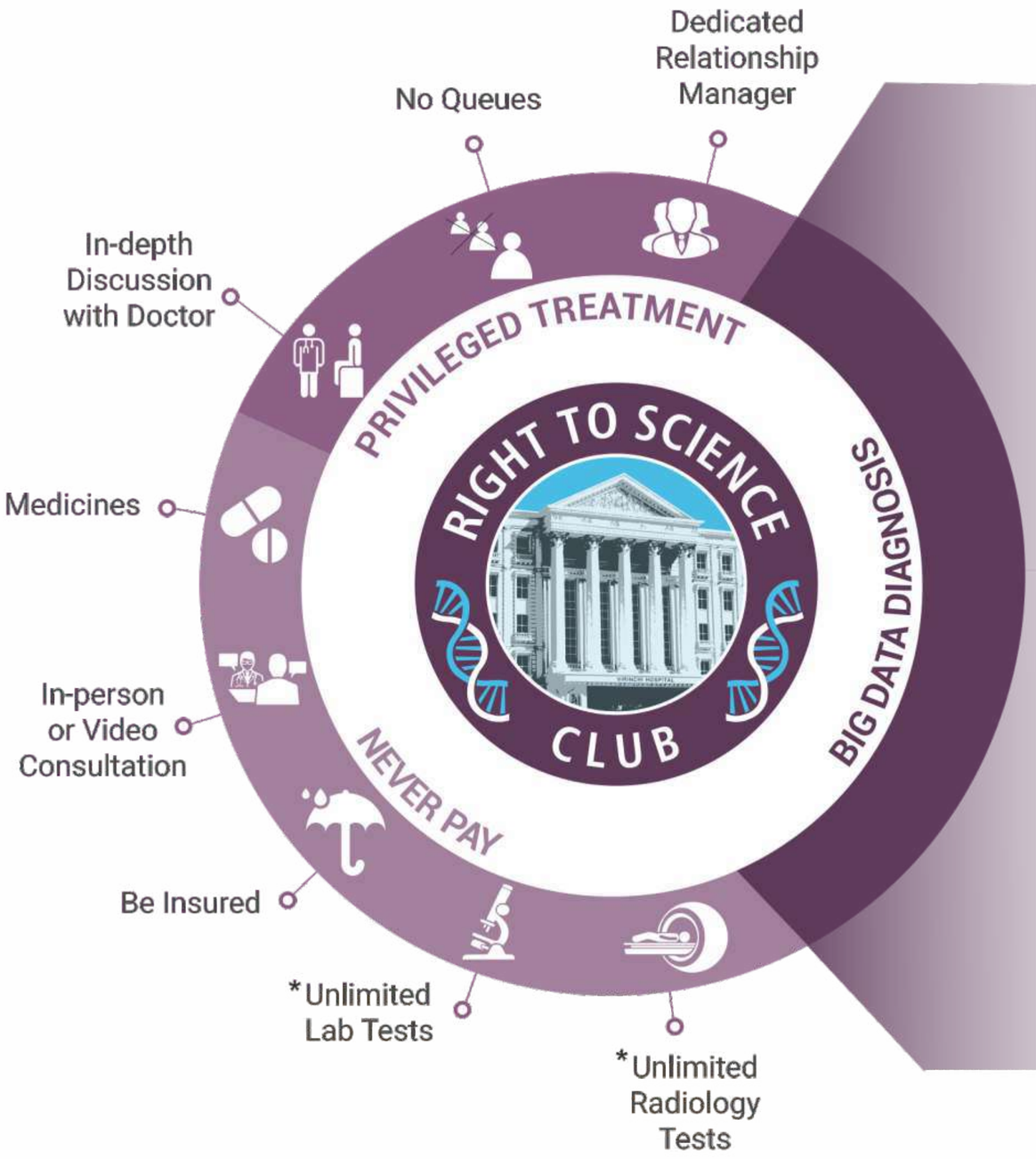

*These tests will be performed as per in-house Sr. Consultants' prescription

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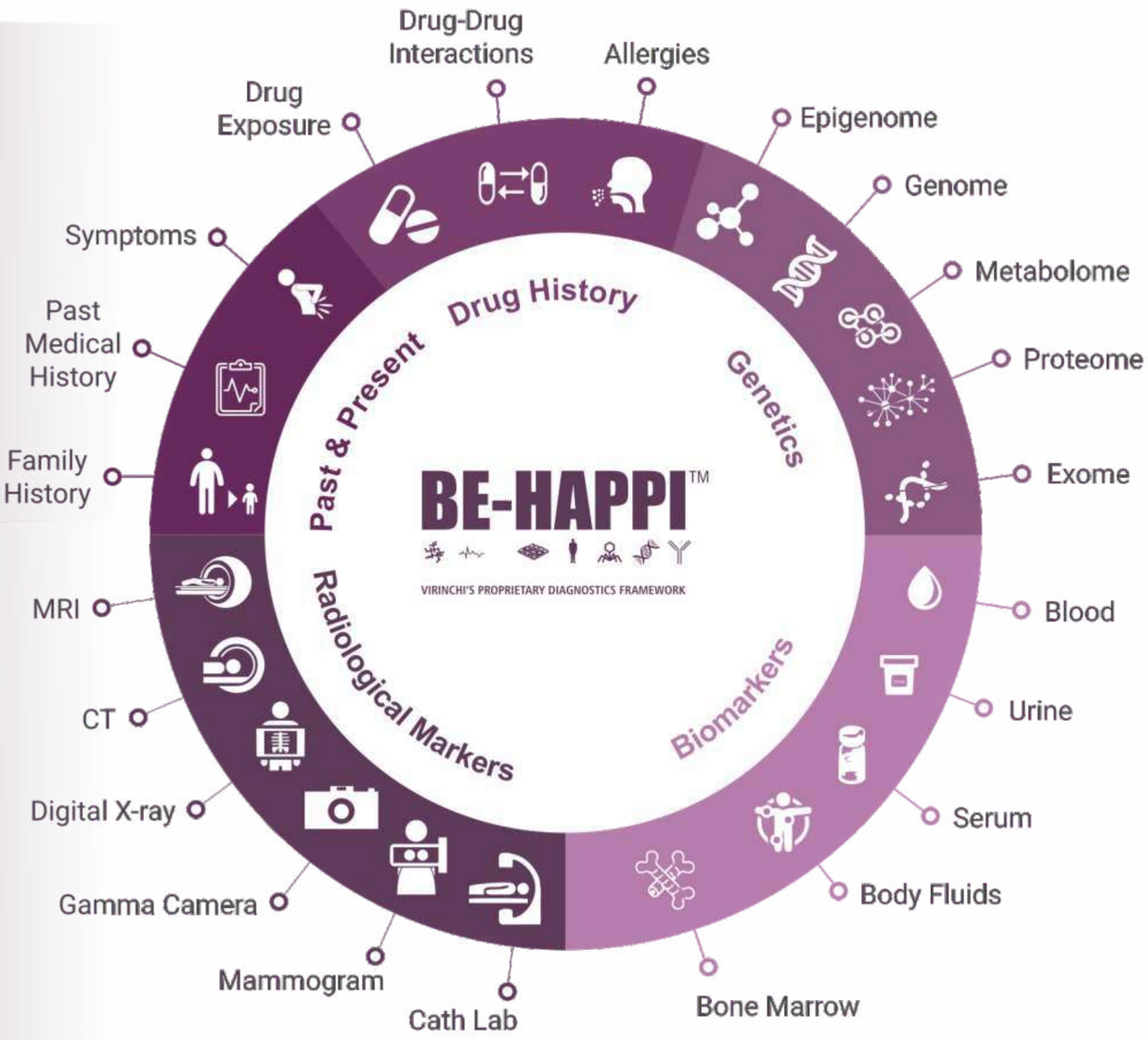

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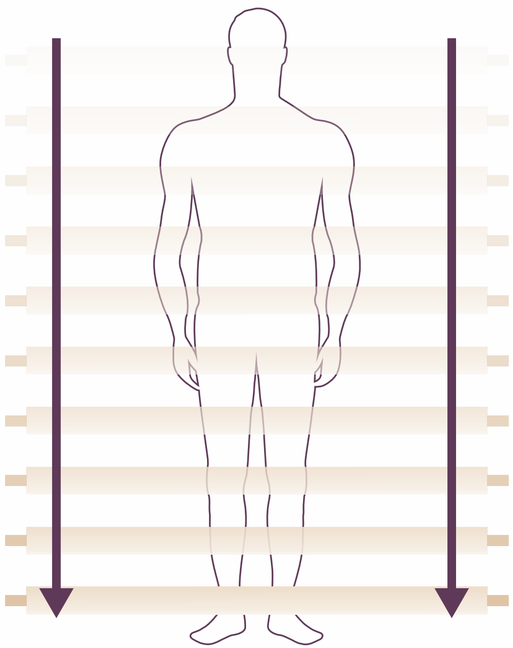
BASELINE HEALTH CHECK UP



EVERY MEMBER UNDERGOES
A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN SYSTEM DISCOVERED VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

BE-HAPPI™

- **B**IOCHEMICAL
- **E**LECTROPHYSIOLOGICAL
- **H**ISTOPATHOLOGICAL
- **A**NATOMICAL
- **P**ATHOGEN SCREENING
- **P**HENOTYPIC & GENETIC
- **I**MMUNOLOGICAL

BASELINE HEALTH CHECK UP

- Fasting Blood Sugar (FBS)
- Plasma Prandial Blood Sugar (PPBS)
- Urea Blood
- Creatinine Serum
- Electrolytes Serum (na K Ci)
- Calcium Serum
- Phosphorous Serum
- Uric Acid Serum
- Magnesium Urine
- Liver Function Tests (LFT)
- C Reactive Protein CRP
- Complete Urine Examination (CUE)
- Stool Routine Examination
- Urine For Micro Albuminuria Qualitative
- Complete Haemogram
- Carcino Embryonic Antigen (CEA) Serum
- Prostate Specific Antigen (PSA) Serum
- Ferritin Serum
- HCV- Elisa
- HIV- Elisa
- HBSAG Elisa
- Pulmonary Function Test (PFT)
- Homocysteine Serum
- Thyroid Profile
- Lipid Profile
- Apolipoprotein A Serum
- Apolipoprotein B Serum
- Vitamin D Serum
- Vitamin B12 Serum Assay
- Lipoprotein A
- Glycosylated Haemoglobin (HBA1C)
- Stool Occult Blood
- Mantoux Test
- Follicle Stimulating Hormone (FSH)
- Leutinizing Hormone (LH)
- Ca Cancer Antigen 19.9 Serum
- Mammography
- Cervical Smear (PAP SMEAR)
- Ca Cancer Antigen 125 Serum
- Ca Cancer Antigen 15.3 Serum
- Folate Serum
- Serum Iron & Iron Binding Capacity (TIBC)
- Folic Acid
- Immunoglobulin G (IgG)
- Immunoglobulin E (IgE)
- MRI Screening Minor
- MRI Screening Major
- Bone Mineral Density (BMD) Whole Body Analysis
- CAG (Coronary Angiogram)
- Color Doppler Of Carotids
- X-ray Chest PA
- USG Whole Abdomen
- Colonoscopy
- CT Brain Plain
- Dexa Scan Whole Body
- ECG
- 2D Echo
- Cardiac Stress Test (TMT)
- BMI- Fat Analysis
- Erythrocyte Sedimentation Rate (ESR)
- Alpha Feto Protein (AFP) Serum
- Absolute Eosinophil Count (AEC)
- VDRL Test (RPR)

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BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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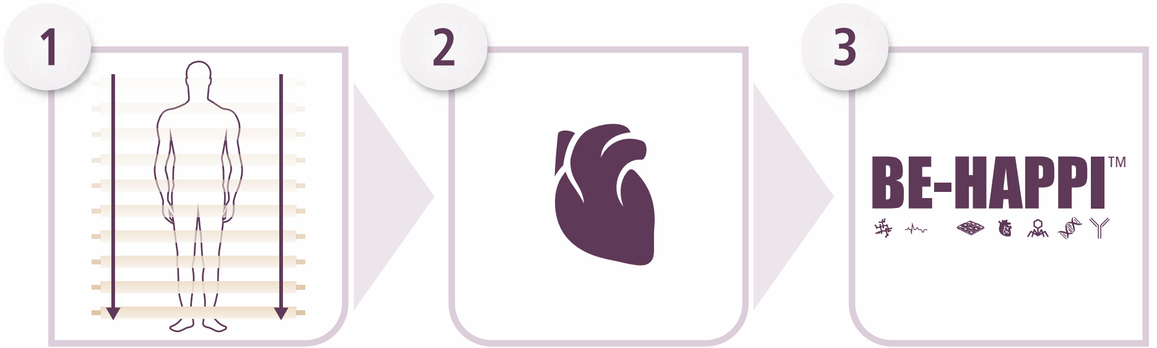

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

ACE / Angiotensin I converting enzyme 1, Activated protein C resistance (APCR), AGT / Angiotensinogen, Albumin excretion rate, AMPK / Protein kinase, Angiopoeitin, Angiotensin converting enzyme (ACE) polymorphism (insertion/deletion), Ankle-brachial index, ANP / Atrial natriuretic peptide, APOAIV / Apolipoprotein A-IV, APOC3 / Apolipoprotein C3, Apolipoprotein A1 (Apo A1), Apolipoprotein B (ApoB), Apolipoprotein E, ARH / LDL receptor, Blood culturing & identification with Echocardiography (TTE/TEE), Blood pressure, Brain natriuretic peptide(BNP or NT-proBNP), Cardiac troponin isoforms, CBS / Cystathionine-synthase, CETP / Cholesterol ester transfer protein, Cholesterol/HDL ratio, Chromogranin A, Circulating endothelial cells, CK-MB, CNP / C-type natriuretic peptide, Coagulase, Collagen, Complement C3, Copeptin (C-terminal provasopressin), Coronary artery calcium, Creatinine, CRP / C-reactive protein, C-terminal pro-endothelin-1 (CT-proET-1), Cyclic GMP, Cystatin-C, Decreased fibrinolysis -TPA/PAI-1, DES / Desmin, DMD / Dystrophin, dRVVT screen with reflex to dRVVT confirm and dRVVT 1:1 mix, E1B adenovirus interacting protein 3 (BNIP3), Endostatin, Endothelial markers CD31, Endothelins, ESR2 / Estrogen receptor β, Estrogen receptor alpha, Exhaled nitric oxide, Extracellular superoxide dismutase (EC-SOD), FGB / Fibrinogen B Beta polypeptide, FGB / Fibrinogen Beta chain, Fibrinogen antigen, Free Triglycerides, Fungal Infective Endocarditis, Galectin-3, GCK / Glucokinase, GGT, Glomerular filtration rate, Glucose, Glutathione-S-transferase P1 (GSTP1), Glycated hemoglobin (HBA1C), GNB3 / Guanine nucleotide binding protein (G protein) Beta Polypeptide 3, GP1BA / Plasma glycoprotein 1, GPIIIA / Glycoprotein IIIa, GPX1 activity, HDL protein, HFE / Hemochromatosis, High Sensitive Cardiac Troponin T (hs-cTnT), High Sensitive-C-reactive protein (hs-CRP), HMOX1 / Heme oxygenase (decycling) 1, Homocysteine (cardiovascular), HP / Haptoglobin, HSP70A1 / Heat shock protein 70-1, Hypercoagulable-D-dimer, Hypercoagulable-Fibrinogen, IFNG / Interferon-Gamma, IL-18, IL-4 / Interleukin-4, IL-6 / Interleukin-6, Increased coagulation factors (von Willebrand Factor), INSR / Insulin receptor, Insulin, Interleukins, Isoprostanes, LCAT / Lecithin cholesterol acyltransferase, LDL, LDL-associated PLA2 (PLAC), Levels of ApoB and ApoAI or ratio of ApoB : ApoAI, Lipoprotein a (Lp [a]), Low-density lipoprotein particle number/concentration (LDL-P), LPL / Lipoprotein lipase, Lp-PLA2 (Lipoprotein-Associated Phospholipase A2), Matrix Metalloproteinases, MDM2 overexpression and MFAP4 in serum, Microalbumin, Midkine, Mid-regional pro-atrial natriuretic peptide (MR-proANP), Mitochondrial NADH dehydrogenase (MT-MD5), MMP1 / Matrix metalloproteinase 1, MMP13 / Matrix metalloproteinase 13, MMP3 / Matrix metalloproteinase 3 (stromelysin 1), MMP-9, Myeloperoxidase (MPO)sFMT-1, N/A / Mitochondrial respiratory chain, Natriuretic peptides, Neutrophil gelatinase-associated lipocalin(NGAL), Nitrotyrosine, Non-HDL-C, N-terminal pro-B-type natriuretic peptide (NT-proBNP), Osteoprotegerin, Oxidized LDL, Pro-collagen, Proteins, REN / Renin, Rho Rho-kinase 1 and ROCK2, SAA(Serum Amyloid A), Soluble ST2, Soluble vascular adhesion molecule-1, Squamous cell carcinoma antigen (SCCA), StarD5 cholesterol binding, Sterol regulatory element binding protein-2, sTRAIL, sTWEAK(soluble tumor necrosis factor-like weak inducer of apoptosis), Superoxide dismutase, Surfactant protein D, Taurine, TH / Tyrosine hydroxylase, THBD / Thrombomodulin, thioredoxin, Thyroglobulin, tissue polypeptide antigen (TPA), Total cholesterol, Triacylglycerols, Triglyceride, Troponins, tumour necrosis factor (TNF)-Alpha, Tyrosine-protein kinase, Uric acid, Urine albumin excretion, Urine Albumin/Creatinine Ratio (Ualb/Cr), very low-density lipoprotein (VLDL), vitamin D, VWF / von Willebrand factor, Beta-trace protein

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Ejection fraction-echocardiogram, Heart's electrical activity-electrocardiogram (EKG or ECG), Pericardial effusion-TTE, Thickness and movement of the heart wall-Transthoracic echocardiogram (TTE), Ventricular aneurysm-echocardiogram, Ventricular tachycardia-ECG

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HEART: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Cardiac Contractility, Coronary Artery Contractility, Endomyocardial Biopsy

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Calcified lesions, Carotid intima-media thickness (CIMT), Coronary artery calcium, Epicardial fats, Inflammation Imaging , Inflammation or Angiogenesis, Myocardial Perfusion Imaging, Stenosis

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Abiotrophia defectiva, Abiotrophia spp, Actinobacillus actinomycetemcomitans, Adenovirus, Aspergillus spp., Bartonella species, Brucella species, Candida spp, Cardiobacterium hominis, Chlamydia species, Coxiella burnetii, Echinococcus granulosus, Echoviruses, Eikenella corrodens, Entamoeba histolytica, Enterobacteriaceae, Enterococci, Enterococcus casseliflavus, Enterococcus faecalis, Enterococcus faecium, Enterococcus gallinarum, Enterovirus/Coxsackievirus, Epstein-Barr virus, Gemella balaenopterae, Gemella bergeriae, Gemella group, Gemella hemolysans, Gemella morbillorum, Gemella sanguinis, Granulicatella adiacens, Granulicatella elegans, Granulicatella paraadiacens, Granulicatella species, Group C streptococci, Group G streptococci, Groups B streptococci, HACEK group, Haemophilus aphrophilus, Haemophilus parainfluenzae, Haemophilus paraphrophilus, Helicobacter pylori antibodies, Hepatitis C virus, HIV, Human herpes virus 6, Influenza virus, Kingella denitrificans, Kingella kingae, Legionella species, Moraxella [Branhamella] catarrhalis, Neisseria elongata subspecies nitroreducens, Neisseria flavescens, Neisseria mucosa, Neisseria sicca, Neisseria flava, Neisseria perflava, Neisseria pharyngis, Parvovirus B19, Pneumococcus spp, Pseudomonas burkholderia, Pseudomonas Species, Salmonella choleraesuis, Salmonella enteritidis, Salmonella typhimurium, Serratia marcescens, Staphylococci , Staphylococci aureus, Staphylococci lugdunensis, Staphylococci epidermidis, Sterptococcus anginosus / Sterptococcus milleri, Sterptococcus bovis, Sterptococcus constellatus, Sterptococcus intermedius, Sterptococcus mutans, Sterptococcus oralis (mitis), Sterptococcus pneumoniae, Sterptococcus pyogenes, Sterptococcus salivarius, Sterptococcus sanguis, Sterptococcus viridans group, Streptococcus spp, Taenia solium, Trichinella spiralis, Tropheryma whippleii, Trypanosoma brucei gambiense, Trypanosoma brucei rhodesiense, Trypanosoma cruzi, Tuberculosis spp

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ABCA1 gene, ABCA1 gene promoter, ABCG1 gene promoter, ABCG1-CpGC3, ACTC / Cardiac actin, ADD1 / Adducin 1 (a), ADMA, ADRA2 / a2 Adrenergic receptor, ADRB2 / Beta2 Adrenergic receptor, ADRB3 / Beta3 Adrenergic receptor, AGTR1 / Angiotensin II receptor type 1, AMHC / a-Cardiac myosin heavy chain, Angiotensin II type 1 receptor (AGTR1) gene 1166A & C polymorphism, APOE Gene, BAX, BCL-2, CCR5 / Chemokine (C-C motif) receptor 5, CD14, CMYBPC / Cardiac myosin binding protein C, CST3, CYP11B2 / Aldosterone, CYP11B2 / Cytochrome P450, CYP1A1 / Cytochrome P450, DNMT2, DSG2 / Desmoglein 2, DSP / Desmoplakin, DTNA / a Dystrobrevin, ELAM / Endothelial leukocyte adhesion molecule-1, END1 / Endothelin 1, END2 / Endothelin 2, F2RL3, Factor V HR2 allele DNA mutation analysis, Factor V Leiden mutation analysis (1691G>A), FOXP3 gene, GALNT2 gene promoter, GCGR / Glucagon receptor, GCK gene-body, GNAI1 / G protein a subunit, GNAS / GNAS complex locus, Growth-differentiation factor 15, H-FABP, HMGCR gene promoter, IGF2, ITGA2 / Integrin a2 Glycoprotein Ia, LEP, LEPR / Leptin receptor, LIPC-CpGA2, LMNA / Lamin A/C, LRP / Lipoprotein receptor related protein, Mid-regional pro-adrenomedullin (MR-proADM), Mitochondrial ATP synthase (MT-ATP6 and MT-ATP8), Mitochondrial Cytochrome C oxidase (MT-CO1, MT-CO2, MT-CO3), Mitochondrial tRNA leucine (MT-TL1), MPO, MTHFR / Methylenetetrahydrofolate reductase (NADPH), MYBPC3 / Myosin-binding protein C cardiac-type, MYH7 / a-Cardiac myosin heavy chain, MYL2 / Myosin regulatory light chain 2; ventricular/cardiac muscle isoform, MYL3 / Myosin light polypeptide 3, MYPN / Myopalladin, N-cadherin and connexin-43, NEBL / Nebulette, Neuregulin 1, NOS2A / Nitric oxide synthase 2A, NOS3 / Nitric oxide synthase 3, NPC1 promoter, NR3C1 / Glucocorticoid receptor, p15INK4b, p16INK4a, P1A1 / Glycoprotein IIIa, PAFAH / Phospholipase A2 group VII, PAI1 / Plasminogen activator inhibitor 1, PDE4D / Phosphodiesterase 4D, PECAM1 / Platelet-endothelial cell adhesion molecule-1, Pentraxin, Pentraxin 3, PKP2 / Plakophilin 2, PLA2G7 gene promoter, PLTP-CpGC, PON1 / Paraoxonase 1, PON2 / Paraoxonase 2, PPAR A / Peroxisome proliferative activated receptor a, Prothrombin (factor II) 20210G>A mutation analysis, PTT-LA with reflex to hexagonal phase confirm, RETN / Resistin, S100A8/A9 complex, sCD40, SCN5A / Sodium channel voltage-gated, SCNN1B / Epithelial sodium channel Beta subunit, SELP / Selectin P, SGCD / Delta-sarcoglycan, sICAM-1, SLC30A8, SOD2 / Manganese superoxide dismutase, STAT 3, STAT 4, STAT2, stratifin (SFN), subfamily I (aromatic compound-inducible) polypeptide 1, subfamily XIB (steroid 11-Beta-hydroxylase), TAFI / Thrombin activatable fibrinolysis inhibitor, TAGAP, TAZ / Tafazzin, TGF-B, TGFB1 / Transforming growth factor Beta1, Tissue inhibitors of metalloproteinase (TIMP1), TNFAIP2 / Tumor necrosis factor a 2, TNFAIP3, TNF-Alpha and receptors, TNF-Alpha promoter, TNIP1, TNNI3 / Troponin I cardiac muscle, TNNT2 / Cardiac troponin T, TNT1 / Cardiac troponin I, TPM1 / Tropomyosin 1 alpha chain, TTN / Titin, VCAM-1, VDR / Vitamin D receptor, VEGFA, ZC3H12C, ZNF313

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Beta-2-Glycoprotein I Antibodies, Cardiolipin antibodies, Chlamydophila pneumoniae antibodies, Cytomegalovirus (CMV) antibodies, Lupus anticoagulant assay, Phosphatidylserine antibodies

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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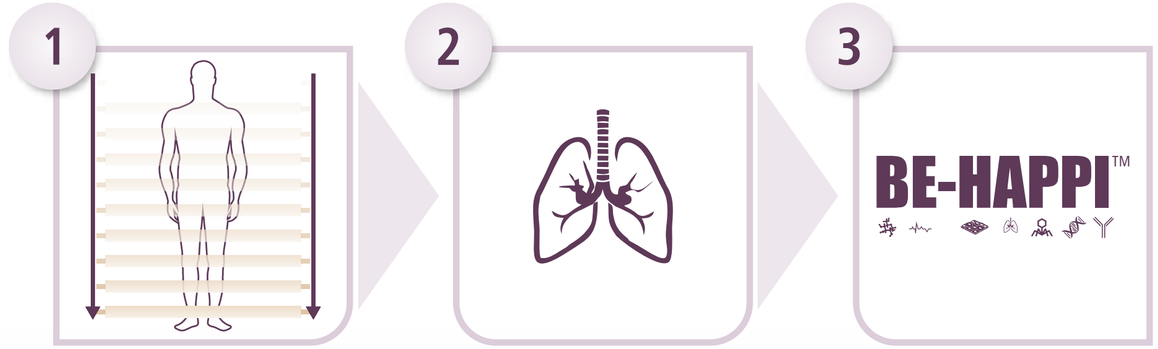

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

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Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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LUNGS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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Biochemical

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serves as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

Acidic fibroblast growth factor (FGF), ACRP-30, Activin-A, Adhesion molecules (E, L-SELECTIN, I-CAM-1, V-CAM-1, VWF), Alpha-fetoprotein, Anaplastic Lymphoma Kinase (ALK), Apo A-I, Apo B-100, Arterial Blood Gases, ASC, b-glucuronidase, C reactive protein, Calgranulin, Cancer antigen-125 (CA-125), Carbohydrate antigen-19.9 (CA-19.9), CK-19, Complement component 9 (C9), Cytokeratin-19 fragments (CYFRA 21-1), Endoglin [CD105], Eotaxin-2, Epidermal growth factor (EGF), Epidermal Growth Factor Receptor (EGFR), Extracellular signal-regulated kinase (ERK), Haptoglobin β chain [Hp β], HDL-C, Hepatocyte growth factor (HGF), Human neutrophil peptides (HNP), IL-13, Immunoglobulin heavy delta chain, Insulin like growth factor (IGF-1), Insulin-like Growth Factor-Binding Protein-2 (IGFBP-2), Interferon-γ (IFN-γ), Interleukin (IL)-8, Keratinocyte growth factor (KGF), LDH (Lactate Dehydrogenase), LDL-C, Lysophospholipids, Macrophage inflammatory protein (MIP) -1α, Major histocompatability complex class II DP Beta1 (HLA-DPB1), Matrix metalloproteinase (MMP)-9, Matrix Metalloproteinase-1 [MMP-1], MIP-1A, Monocyte chemotatic protein (MCP)-1, MPIF-1, Mucin-associated antigens (KL-6/MUC1), N-acetyl-proline-glycine-prolin, Neopterin, Neutrophil elastase (NE), NF-κB, Nicotinamide N-methyltransferase, p21(Cip1)-interacting zinc finger protein (Ciz1), Phosphatidylcholines (PCs), Phosphatidylethanolamines (PEs), Phosphatidylinositols (PIs), Phosphoinositide 3-kinases (PI3-K), Plasma kallikrein (KLKB1), Platelet derived growth factor (PDGF), Pro-gastrin-releasing Peptide (proGRP), Progesterone Receptor Membrane Component 1/ sigma-2 Receptor (Pgrmc1), Prostaglandin D2 synthase (PTGDS), Retinoic acid, Serum amyloid A (SAA), Serum Ferritin, sIL-2R, Sphingolipids, Spleen Tyrosine Kinase (Syk), Surfactant protein A (SP-A), Surfactant protein B (SP-B), Surfactant protein D (SP-D), Thrombospondin 1, TNF, Total Cholesterol, Transforming Growth Factor-β (TGF-β), Triglyceride, Tumor M2- pyruvate kinase (PKM2), Tumor necrosis factor α (TNF-α), Type III procollagen, Urokinase Plasminogen Activator Receptor (uPAR), Vascular endothelial growth factor (VEGF).

Electrophysiological

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Sympathetic skin response(SSR), Resistance and lung voplume measurement-Pneumograph, Pulmonary function -impedance pulmonary function system (IPFS)

Histopathological

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Anti-Human Epithelial Antigen, Ber-EP4 by Immunohistochemistry, Calretinin by Immunohistochemistry, CD15, Leu M1, CD56 (NCAM), Cytokeratin 19 Fragment (CYFRA 21-1), Cytokeratin 20 (CK 20), Cytokeratin 5,6 (CK 5,6), Epithelial-related Antigen, Fibroblastic focus (FF), IHC-CK7, Iroquois homeobox 5, Lysosomal-associated membrane protein 3, Microfibrillar-associated protein 4, Napsin A, Pan Cytokeratin (AE1,3) by Immunohistochemistry, Precision Cut Lung Slices (PCLS), Secretoglobin, family 1A, member 1 (uteroglobin), Solid Tumor Mutation Panel, Soluble Mesothelin Related peptides , Thyroid Transcription Factor (TTF-1), Transmembrane protein 100, Wilms Tumor (WT1), N-terminus

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Anatomical

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Coronal 2-fluoro-2-deoxy-d-glucose-PET, Airway stenosis, Coronal subtraction perfusion image of lung, Diffused tree-in-bud opacities in CT Image, Emphysema volume and distribution, Fat attenuation in the right lobe nodule nodule in CT, First pass lung perfusion (embolism, hypoxic vasoconstriction) - 3D gradient echo T1-weighted, Fractal dimension, High resolution angiogram (embolism AVM) - 3D gradient echo T1-weighted, Infiltrates - Fast spin echo T2-weighted, Iodine and FDG Uptake, Lobe volumes, Lung Lesions - diffusion-weighted imaging (DWI) MRI, Lung parenchyma perfusion - First Pass Perfusion MRI , Lung parenchyma volume, Lymph nodes bone metastases - Fast spin echo T2-weighted, Lymph nodes bone metastases - Short tau inversion recovery, Masses - Fast spin echo T2-weighted, Nodules and masses - Diffusion weighted imaging (DWI), Nodules and masses - Fast spin echo T2-weighted, Pulmonary arterial tree - MR angiography, Pulmonary embolism - MR angiography and MR perfusion , Pulmonary embolism - Steady state GRE, Pulmonary nodules, masses, airways - 3D gradient echo T1-weighted, Respiration mechanics - Steady state GRE, Spiculated mass in the left lower lobe in CT

Pathogen screening

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Bacillus species, Aspergillus, Blastomyces dermatitidis, Bordetella pertussis, Branhamella catarrhalis, Chlamydia pneumoniae, Chlamydia psittaci, Coccidioides immitis, Corynebacterium diphtheriae, Histoplasma capsulatum, Influenzavirus A, Klebsiella pneumoniae, Legionella pneumophila, Measles Virus, Mucor, Mumps Virus, Mycobacterium tuberculosis, Mycoplasma pneumoniae, Neisseria meningitidis, Pneumocystis jiroveci (carinii), Respiratory Syncytial Virus (RSV), Rhizopus, Staphylococcus aureus, Streptococcus pneumoniae, Streptococcus pyogenes

Phenotypic & genetic

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ABCA3, CDKN1A, Clara-cell protein -CC16, Cytochrome B-Reductase 1 (CYBRD1), D13S170, D9S286, D9S942, DAPK1, E2F4, E74 like factor 1 (ELF1), Erythroblastosis virus E26 oncogene homologue (2ETS2), ESR1, FABP3, FHIT, Filamin A (FLNA), GATA49D12 , GJB1, HIC1, HS3ST2, IL-1ra, ITAC/CXCL-11, K-ras gene, LTB4, MEK1, NKX2.1, p53 gene, PARC, PAX3, Peroxiredoxin 1 (PRX1), PRDM2, PRKCDBP, PRSS3 (serine protease family member-trypsinogen IV - a putative tumor suppressor gene), RAP1, RARß, RASSF1, RIPK3, ROS, SFN, s-ICAM-1, SLX, Surfactant protein C gene (SP-C), TMS1, Tumor supressor p16INK4a

Immunological

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and others. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Allergen-specific IgE antibody Test, Angiotensin converting enzyme (ACE) , Anti serum antibodies, Anti-CCP antibodies, Anti-ds DNA Test, Anti-elastin*, anti-GBM autoantibodies, Anti-JO-1 autoantibodies, Antinuclear (or anti-cytoplasmic) antibodies, Anti-SRP antibodies, Anti-tRNA synthetase antibodies, H. influenzae antibodies, IGFBP-2 and anti IGFBP-2 autoantibody, IgG, IL-8 autoantibodies, S. pneumoniae antibodies, Serum IgE testing to Aspergillus fumigatus

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BIOCHEMICAL

ELECTROPHYSIOLOGICAL

HISTOPATHOLOGICAL

ANATOMICAL

PATHOGEN SCREENING

PHENOTYPIC & GENETIC

IMMUNOLOGICAL

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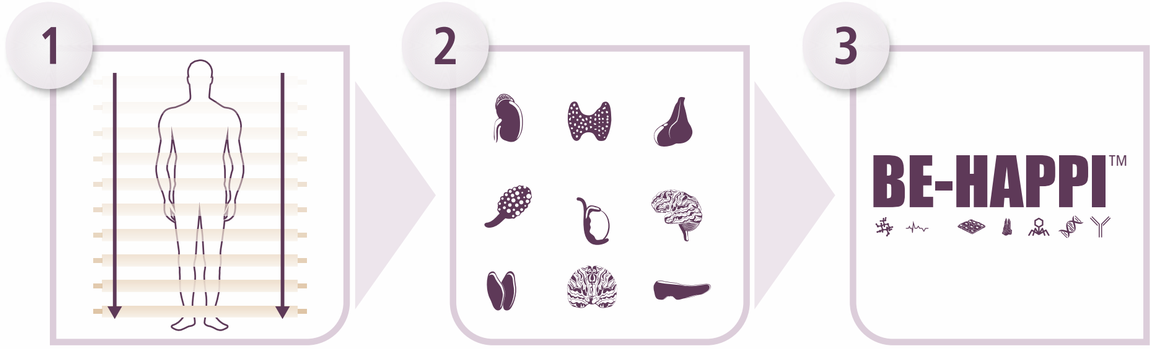

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN SYSTEM DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

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Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

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ENDOCRINE SYSTEM: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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Adrenal gland

Thyroid

Pituitary gland

Brain

Ovary

Testicle

Brain

Pancreas

Thymus

BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serves as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

5-hydroxyindoleacetic acid (5-HIAA), 8- oxoguanine (8oxoG), 8-hydroxy-2□-deoxyguanosine (8oxodG), Adiponectin (ADIP), Adrenal cortex Mineralocorticoids (e.g. aldosterone) steroids, Adrenal Corticotropin Hormone (ACTH), Adrenal medulla Noradrenaline (norepinephrine) tyrosine derivative, Adrenaline (epinephrine) tyrosine derivative, Aldosterone, Amylin peptide, Androgens (e.g. testosterone), Angiotensin, Angiotensinogen protein, antidiuretic hormone (ADH), Antimullerian Hormone, Asprosin, Betatrophin, Bone Osteocalcin peptide, Brain natriuretic peptide (BNP), Calciferol (vitamin D 3)) steroid derivative Skin, Calcitonin peptide, Calcitriol steroid derivative, Cancer antigen 19–9 (CA-19-9), Catecholamines (epinephrine and norepinephrine), Cholecystokinin (CCK), Cholesterol (CHOL), Chromogranin, Compound F Hydrocortisone, Copeptin, corticosteroid-binding globulin (CBG), corticotropin releasing hormone (CRH), Cortisol (CORT), C-peptide, Creatine kinase-MB (CK-MB), Cytochrome P450 oxidoreductase (POR), Dehydroepiandrosterone (DHEA), Dehydroepiandrosterone sulfate (DHEAS), Dihydrotestosterone(DHT), Dihydrotestosterone Androstaner-3-one, Electrolyte Panel, Epinephrine, Erythropoietin (EPO), Estradiol, Estrogen, Estrone, F2-isoprostanes, Fibroblast Growth Factor 19 (FGF19), Follicle stimulating hormone (FSH), Free fatty acids (FFA), Free Triiodothyronine (T3), Gastrin, Gastrin-releasing peptide (GRP), Ghrelin, Glucagon, Glucocorticoid receptor (GR), Glucocorticoid steroids, GnRH, Growth Hormone, Growth hormone-releasing hormone (GHRH), Guanine nucleotide regulatory protein, Haptoglobin (HP), HCG α and β, Hepcidin, HGH: Somatotropin (STH), High-density lipoprotein (HDL), Histamine, HLA-DR3, Human chorionic gonadotropin (HCG) protein, Incretins, INSR, Insulin, Insulin-like Growth Factor 1, Insulin-like growth factor binding protein 5 (IGFBP5), Insulin-like Growth Factor-binding Protein 3 (IGFBP-3), Interferon inducible T cell α chemoattractant (ITAC), Interferon-γ, Interleukin 12 subunit p40, Interleukin-13, Interleukin-2, Interleukin-3, Iodine, Leptin, Low-density lipoprotein (LDL), Luteinizing hormone (LH), Macrophage derived chemokine, Matrix metalloproteinase 7 (MMP-7), Melatonin tryptophan derivative, Neurokinin A, Neuron-specific enolase (NSE), Neuropeptide K, Neuropeptide Y, Neurotensin, Norepinephrine, Nucleosomal binding protein 1 (NSBP1), Osteocalcin, Oxytocin, Pancreatic polypeptide (PP), Parathyroid Hormone (PTH), Parathyroid hormone-related protein (PTH-rP), Peptide YY, Phosphatonin protein, Pregnancy-associated plasma protein A (PAPP-A), Pregnenolone, Progesterone (PRG), Proinsulin, Prolactin (PRL), Renin, Retinoic acid receptor-γ (RARG), Retinol Binding Protein 4, Secretin, Serotonin, Sex Hormone-Binding Globulin(SHBG), Sodium-iodide symporter, Somatostatin, Somatostatin peptides 14, Somatostatin peptides 28, Stem cell factor, Substance P (SP), Tamm-Horsfall urinary glycoprotein, TeBG (Testosterone-Binding Globulin), Testosterone Free (Direct), Testosterone Total, Thrombopoietin, Thyroglobulin (TG), Thyroid-stimulating hormone (TSH), Thyrotropin-releasing hormone (TRH), Thyroxine T4 Direct, Thyroxine T4 Free, Thyroxine T4 Total, Thyroxine T4 tyrosine derivative, Thyroxine-binding globulin (TBG), Total Triiodothyronine (T3), Triglycerides (TG), Triiodothyronine (T3) Reverse, Triiodothyronine T3 Uptake, Tumor necrosis factor alpha (TNF-α), Vasoactive intestinal peptide(VIP), 2-amino adipic acid (2AAA), Albumin/Globulin Ratio, A1c (Glycohemoglobin), Alanine Aminotransferase (ALT or SGPT), AlbuminSerum, Aldosterone:Renin Ratio, Alkaline Phosphatase, Alpha-Fetoprotein (AFP), Aspartate Aminotransferase (AST or SGOT), Bilirubin Total, Blood Urea Nitrogen (BUN), BUN/CreatinineRatio, Calcium, Cancer Antigen 125 (CA-125), Cancer Antigen 15-3 (CA 15-3), Cancer Screening Panel, Carbon Dioxide, Carcinoembryonic Antigen (CEA), Chloride Serum, Cholesterol/HDL Ratio, Complete Blood Count (CBC), C-reactive protein (CRP), Creatinine Serum, Estriol (E3), Fluids & Electrolytes, Folic Acid (Folate), FreeThyroxine Index (FTI) T-7, GGT Gamma-glutamyl transpeptidase, Globulin Total, Glucose, Iron and Total Iron-binding Capacity, Lactate Dehydrogenase (LDH) Protein, Phosphorus, Potassium, Prostate Specific Antigen (PSA), Sodium, Urinalysis Complete, Uric acid, Vitamin A, Vitamin B12, Vitamin D 25-hydroxy

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

CFTR function by nasal potential difference (NPD) testing- acute recurrent pancreatitis (ARP); Insulin oscillations; Bursting electrical activity observed in islets; Dynamics of membrane potential(ER ,Calcium feedback); Glucose-induced electrical activity recorded from a β-cell(oscillatory electrical activity); Hyperstimulation (elevated glucose)-electrical hyperexcitation and chronically elevated ca+2; Diverse pattern of modulation of P3 latencies-equiprobable (50/50) auditory Go/NoGo; Ca2+-dependent action potentials in human tumoral pituitary cells

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Adipsin (complement factor D), Anti-angiogenic Pigment Epithelial Derived Factor (PEDF), Arterial stiffness, Blood retinal barrier leakage, Endothelial dysfunction, Inhibin, Plasminogen activator inhibitor (PAI)-1, Resistin Retinal damage, Synaptophysin

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Spatial distribution of thyroid functional attributes-scintigraphy ("scanning"); Degrees of echogenicity of the tissues; Differential tissue attenuation by an x-ray beam; Image of iodine distribution-fluorescent thyroid scanning; Nodules and masses evaluation-scintigraphy; Gland size & location of thyroid tissue-scintigraphy; functional status of thyroid nodules-Radionuclide scanning; Size of cystic nodules-Ultrasonography; Isoechoic parathyroid gland—Sonogram; Typical hypoechoic adenoma-Sonogram; Extrathyroidal feeding vessel (in Parathyroid Adenoma)- Doppler imaging; Increased T2 signal in adenoma- T2-weighted MRI; Intra- and parasellar anatomy (Pituitary)-intraoperative MRI (IMRI); Superimposition of tissue stiffness-Endoscopic ultrasound in pancreatic lesions; Pancreatic arterial perfusion (in acute pancreatitis)-Computed Tomography; Diffusely heteroechoic and enlarged gland-Thyroid sonography in Graves disease; Atrophic pancreas, dilated main pancreatic duct-Axial non-contrast CT; Dense calcifications-Axial non-contrast CT; Presence of intracellular lipid in adrenal adenomas-chemical shift MRI; Macroscopic fat-attenuation (Adrenal myelolipoma)- CT; Pituitary macroadenoma-MRI

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Actinomyces, Bacillus anthracis, Bordetella bronchiseptica, Bordetella pertussis, Burkholderia pseudomallei, Campylobacter jejuni, Candida, Chlamydia trachomatis, Clostridium perfringens, Escherichia coli, Klebsiella pneumoniae, Listeria monocytogenes, Neisseria meningitides, Proteus mirabilis, Pseudomonas aeruginosa, Pseudomonas fluorescens, Salmonella enterica, Shigella flexneri, Shigella sonnei, Staphylococcus spp, Streptococcus spp, Tetrahymena pyriformis, Vibro species, Yersinia enterocolitica

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

AAAS, ABCD1, ADAM metallopeptidase domain 12 (ADAM12), AIRE, APE1, APE2, BMAL1, BRCA1, BRCA2, cAMP, CDKN1B, CgA, CgB, Coiled-coil domain containing 15 (CCDC15), CRHR2, CTCF, CTLA-4, Cyclin-dependent kinase inhibitor 1B (p27Kip1), CYP11A1, CYP11B1, CYP17A1, CYP19A, CYP21A2, CYP27B1, DNMT3a, DNMT3b, E2F, E-cadherin, FGF23, FGFR2, GADD45, GFBP-3, GNRH2, HOXA10, HSD17B3, HSD3B1, HSD3B2, Leptin receptor (LEPR), Ligand-gated ion channel 5 (P2RX5), MBD1, MBD2, MBD3, MBD4, MC2R, MCF-7, MeCP2, Melanocortin 2 receptor accessory protein (MRAP;B27, C21orf61, FALP, FGD2, GCCD2), MEN1, MEN2, MLTF, N uclear receptor subfamily 0 group B member 1 (NROB1), Nei like DNA glycosylase 1 (NEIL1;FPG1, NEI1, Hfpg1), Nei like DNA glycosylase 3 (NEIL3;FGP2, FPG2, NEI3, ZGRF3, hFPG2, Hnei3), Neuropilin-1 (NP1), NTG1 bifunctional N-glycosylase/AP lyase (NTG1;FUN33; ogg2; SCR1), Nth like DNA glycosylase 1 (NTHL1), Nuclear receptor subfamily 5, group A, member 1 (NR5A1), Period circadian clock 1 (PER1), Phosphatase and tensin homolog (PTEN), Polynucleotide kinase 3'-phosphatase (PNKP), Prolactin receptor (PRLR), Pro-opiomelanocortin (POMC), Purinergic receptor P2X, Ras association domain-containing protein 1 (RASSF1A), Reelin (RELN), RET ret proto-oncogene (PTC; MTC1; HSCR1; MEN2A; MEN2B; RET51; CDHF12; CDHR16; RET-ELE1), Retinoic acid receptor b (RARb), Solute carrier family 5 member 5 (SLC5A5), Steroidogenic Acute Regulatory Protein (StAR)

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and others. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Thyroglobulin Antibody, Thyroid Antibodies, Thyroid Antithyroglobulin Antibody, Thyroid Peroxidase Antibodies

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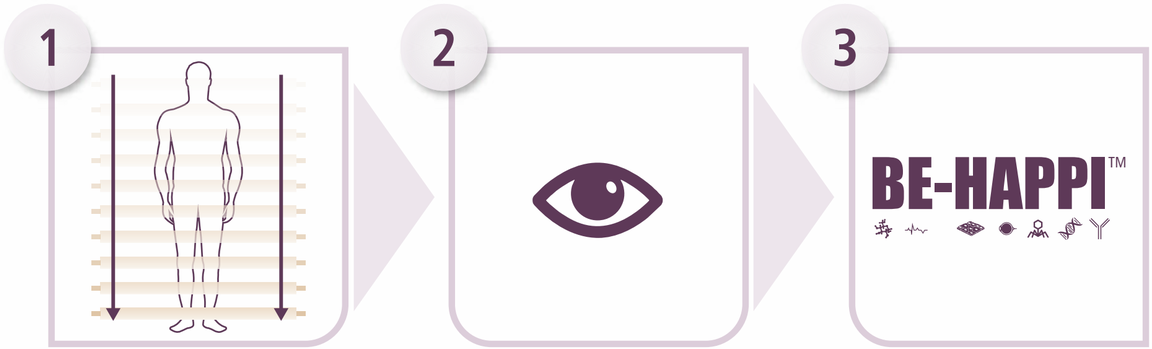

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN SYSTEM DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

Alpha enolase, Amyloid beta, Apelin, Apo A, Apo B, Apo E, Apolipoprotein, C reactive protein (CRP), carboxyethylpyrrole (CEP), Ceruloplasmin, Chemerin, Cholestrol, Complement C3,Complement C5, Cystatin, Epidermal growth factor (EGF), Free Thyroxine (T4), Growth factors, IFN gamma, IL 1 Alpha, IL 1 Beta, IL 1Ra, IL 2R, IL 6, IL 7, IL1, IL10, IL11, IL13 ,IL4, Lactoferrin, Lipocalin, Low-density lipoprotein cholesterol (LDL-C), NGAL, Nitrotyrosine(NT), N-retinylidene N-retinylethanolamine, Osteoprotegerin(OPG), Retinol binding protein (RBP)4, Superoxide dismutase (SOD), TGF-Transforming growth factor, Thyroid-stimulating Hormone (TSH), TNF alpha, Transferrin (TF), TRH, Triglycerides, Triiodothyronine (T3), TSH receptor, Tumor necrosis factor beta, Tyrosine kinase with Ig and EGF homology domains, Urinary estrone, Vasoactive intestinal peptide (VIP), Vasopressin, VEGF, Von Willebrand factor

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Corneo-retinal standing potential-EOG(Electrooculogram)signals, Electrical response of rods and cones-electroretinography (ERG), Nystagmus-electronystagmogram (ENG)

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Atypical lymphocytic infiltrate, Collagen type VIII, Conjunctival biopsy-granulomatous inflammation, Granulomatous inflammation of the choroids and retina, Intraocular inflammation, Metaplastic changes in choroid and RPE, Retinal detachment, Retinal necrosis

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EYE: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Arteriovenous nicking, Bifurcation geometry , Capillary flow velocity-Scanning laser ophthalmoscope, Pigmented retina lesions such as choroidal naevi, Retinal arteriolar narrowing, Retinal nerve fibre layer(RNFL) changes, Vascular tortuosity, Vessel diameter

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

8-OHdG, 8-oxodG, Adhesion molecules- ICAM1, Adhesion molecules- VCAM1, AQP1, AQP4, ARMS2/HGRA1, CCL2, CCL-3, CCL-4, CCL-5, CCR2, CFBa, CFBb, CFC3a, CFC3d,CFC5a, CFH, Complement component factor D (CFD), CXCL1, CXCL10, CXCL11, CXCL2, CXCL8, CXCL9, HLA-DR, ICAM, LPGDS, LRR, MAPKs, MCP-1, MMP7, NACHT, NLRP3, TIMP3, Urocortin 2 (UCN2), VCAM, VEGF-A, VEGF-C, Von Hippel–Lindau tumor suppressor gene (VHL), XRCC1

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Acanthamoeba castellani, Adeno virus, Aspergillus, Bacillus cereus, Candida albicans, Chikungunya virus, Chlamydia trachomatis, Dengue virus, Epstein barr virus, Fusarium, Haemophillus aegypti, Haemophillus influenzae, Herpes simplex, Herpes zoster, Lymphocytic choriomeningitis virus-LCMV, Moraxella lacunata, Neisseria gonorrheae,Propionibacterium acnes, Pseudomons aeruginosa, Serratia, Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus pneumoniae, Toxoplasma gondii, Vibrio species, West nile virus, Yersinia enterocolitica

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Anti Chlamydia antibodies, Anti extractable nuclear antigen test (anti ENA), Anticardiolipin antibodies test, IgM, Monoclonal and polyclonal antibodies, Staphylococcus antibodies, Streptococcus antibodies

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BIOCHEMICAL

ELECTROPHYSIOLOGICAL

HISTOPATHOLOGICAL

ANATOMICAL

PATHOGEN SCREENING

PHENOTYPIC & GENETIC

IMMUNOLOGICAL

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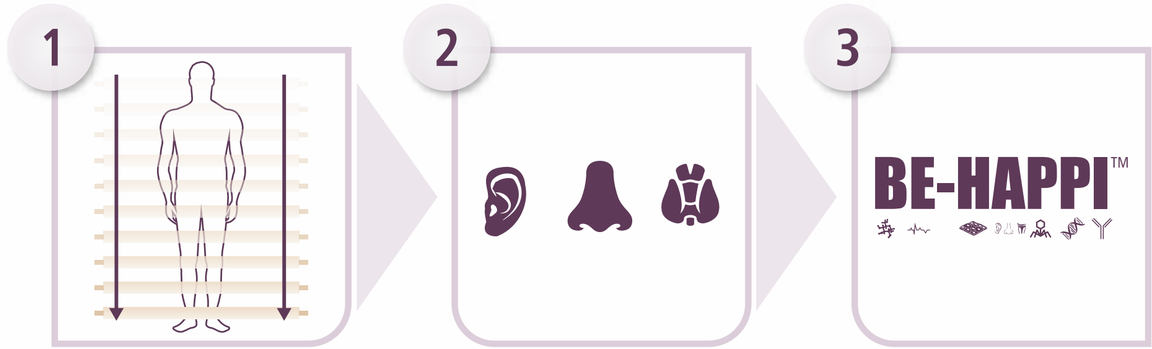

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EARS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serves as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

a2-HS-glycoprotein (fetuin A), a-antichymotrypsin, Albumin, Alpha tocopherol(Vitamin E), Alpha-1 Antitrypsin or α1-antitrypsin (A1AT), Amphiphysin 2, Apolipoprotein D(Apo D), ATP-Synthase, Bcl-2 family proteins, Calumenin, Cisplatin, Copine-6, C-reactive protein (CRP), Eosinophilic cationic protein, EsR1: Estrogen receptor1, Fodrin, Gelsolin, Glutamate, Glutamate receptor, Glutathione, Glutathione transferase, GTPases, Heme oxygenase, Inducible nitric oxide synthase, Interferon gamma (IFNγ), Interleukin 1 beta (IL1β), Interleukin 10 (IL-10), Interleukin 17A (IL-17 or IL-17A), Interleukin 4 (IL4), Interleukin 5 (IL5), Interleukin 6 (IL-6), Interleukin 8 (IL8 or chemokine (C-X-C motif) ligand 8, CXCL8), Interleukin-22 (IL-22), Intracellular calcium, Malondialdehyde (4-hydroxynonenal), Metallothionein, Myeloperoxidase, Nuclear factor-kappa beta (NF-kB), Peripherin, Peroxynitrite, Stereociliary tip-link protein, Stress-activated protein kinases, Transferrin, Transforming growth factor beta 1 (TGF-β1), Tryptophan hydroxylase, TSAT (Transferrin Saturation), Tumor necrosis factor alpha (TNF-α)

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Auditory brainstem response (ABR), Distortion product otoacoustic emissions (DPOAEs) by electrcochleography (ECoG), Electronystagmogram, Evoked summating potentials (SPs) by electrcochleography (ECoG), Measure Mismatch negativity(MMN), Ortical auditory evoked potential (P1), Otoacoustic emissions (OAE) test

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Cholesteatoma fragments, c-jun, Eustachian tube function, Fibrocystic changes in tympanic membrane, Ossicular erosion in middle ear cavity, Proliferation cell nuclear antigen (PCNA), Tympanosclerotic plaques

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EARS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

2/ Gadolinium enhanced 3-T MR images (endolymphatic hydrops); Supratubal recess (STR) (anterior epitympanic recess); Tegmen height; Degree of bony erosion; Enlargement of the fallopian canal; Ossicular erosion; Length of the eustachian tube; Osseous structures; Fluid-filled spaces; Intracanalicular and cerebellopontine angle lesions-MRI

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Corynebacterium species, Escherichia coli, Klebsiella, M catarrhalis, Measles virus, Moraxella catarrhalis, Mumps virus, Neisseria meningitides, Propionibacterium acnes, Proteus mirabilis, Pseudomonas aeruginosa, Rubella virus, Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus anginosus, Streptococcus pneumoniae, Streptococcus pyogenes, Varicella zoster

PHENOTYPIC & GENETIC

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PARAMETERS TESTED @ VIRINCHI

Cadherin-23 (CDH-23), Carcinoembryonic antigen-related cell adhesion molecule 16, Caskin, Cochlin(COCH), Connexin-26, Cyclic nucleotide-gated channel a-3, Deafness Associated Tumor Suppressor (DFNA5), DNA (cytosine-5)-methyltransferase 3 alpha (DNMT3A), DNA (cytosine-5-)-methyltransferase 3 beta (DNMT3B), Mapka2: MAP Kinase activated protein kinase2, Methyl-CpG-binding proteins (MeCP), Neural EGFL Like 2 (NELL2), Nipsnap, Nuclear factor-erythroid 2-related factor 2 (Nrf2), Organ of Corti protein 1(OCP-I), Organ of Corti protein 2 (OCP-II), Otolin-1, Paralemmin-1, Potassium voltage-gated channel subfamily Q member 4(KCNQ4), POU4FA, Proliferating cell protein Ki67, Ras, Rb1/E2F1, RDX (radixin), Sideroflexin-3, Sodium-hydrogen exchange regulatory cofactor NHE-RF2 (NHERF-2), Solute Carrier Family 26, Member 4 (SCL26A4), TECTA (tectorin alpha)

IMMUNOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Antibodies to U1 ribonucleoprotein, Anti-DNA antibodies, Anti-HSP70 or anti cochlear antibody, Antinuclear antibodies (ANAs), Immunoglobulin (IgM) testing, Immunoglobulin E (IgE)

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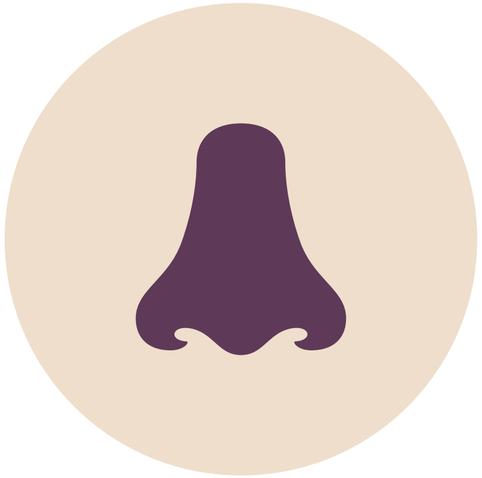

BIOCHEMICAL

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PARAMETERS TESTED @ VIRINCHI

HDL, 27-hydroxycholesterol, 8-isoprostane, alpha 2 macroglobulin, Alpha-tubulin, bilirubin oxidative markers, carboxymethyl-lysine, Complete Blood Count (CBC), CRP (C-Reactive Protein), Cysteinyl leukotrienes, cytokeratins, ECP (eosonophil cationic protein), EDN (eosonophil derived neurotoxin), Eotaxin, Erythrocyte Sedimentation Rate (ESR), F2-isoprostane, G-CSF(Granulocyte-colony stimulating factor), GM CSF(Granulocyte-macrophage colony-stimulating factor), hydrogen peroxide, hydroxynonenal, IL-15(Interleukin-15), IL-1a(Interleukin-1α), IL-1b(Interleukin-1β), IL-7(Inteleukin-7), IL-9(Interleukin-9), iNOS(Inducible Nitric Oxide Synthase), LDL-C, lysozyme, malondialdehyde-lysine, MBP (major basic protein), MIP-1 alpha, MIP-1b(Macrophage inflammatory protein-1β), N-acylethanolamines (NAEs), Nitirc oxide, Nitro tyrosine, Patch testing, Pentosidine, Prostaglandin, Serum Albumin, TNF-α tumor necrosis factor-alpha, Tryptase

ELECTROPHYSIOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Vibrating vocal folds-electroglottograph, Vomeronasal organ study-electrovomerography

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Angiocentric growth pattern in nasal lymphoma, Coagulative necrosis in nasal lymphoma, Infiltration by plasma cells and lymphocytes, Granulomatous or nongranulomatous vasculitis, Extravascular foci of necrosis

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Mucosal thickening-X-ray; Concha bullosa-Paranasal Sinus X-ray; width of posterior nares-CT imaging; anterior bony width (ABW)-Axial CT; minimal soft tissue width (MMW); bony choanal aperture width (BCAW); nasopharynx vertical distance (NVD); vomerine width; width of pyriform aperture; Anterior mucosal width(AMW); Polypoid soft-tissue masses; Noninflammatory lesions; Opacified sinus with hyperdense contents; Maxillary buttresses; Ethmoid air cells

PATHOGEN SCREENING

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PARAMETERS TESTED @ VIRINCHI

Aspergillus, Bacillus species, Bordetella pertussis, Corynebacterium diphtheriae, Coxiella burnetii, Diphtheroids, Haemophilus influenza, Histoplasma capsulatum, Human herpesvirus-6 (HHV6), Influenza virus , Klebsiella pneumoniae, legionella pneumophila, Micrococci, Mucor, Mycobacterium bovis, Mycobacterium tuberculosis, Pneumocystis jiroveci , Respiratory Syncytial Virus (RSV), Rhizopus, Staphylococci, Staphylococcus aureus, Streptococcus pneumoniae, Streptococcus pyogenes

PHENOTYPIC & GENETIC

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PARAMETERS TESTED @ VIRINCHI

Alu, ANO3(Anoctamin 3), Aβ42, BMP4(Bone Morphogenetic Protein 4), CCDC65 gene(Coiled-Coil Domain Containing 65), c-Myc, CX26 gene(Gap junction beta-2 protein (GJB2)), CX30 gene(Gap junction beta-6 protein (GJB6)), delta F508(Cystic Fibrosis Transmembrane Conductance Regulator ΔF508), DHODH(Dihydroorotate dehydrogenase), DNAH11(Dynein Axonemal Heavy Chain 11), DNAH5(Dynein Axonemal Heavy Chain 5), DNAI1(Dynein Axonemal Intermediate Chain 1), DPP6(Dipeptidyl aminopeptidase-like protein 6), DRC1 gene(Dynein Regulatory Complex Subunit 1), DRC4 gene(Dynein Regulatory Complex Subunit 4), FAM19A5(Family With Sequence Similarity 19 Member A5, C-C Motif Chemokine Like), FGF10(Fibroblast Growth Factor 10), FGF2(Fibroblast Growth Factor 2), FGFR1 gene(broblast Growth Factor Receptor 1), Klf4(Kruppel Like Factor 4), KRT5(Keratin 5), Leucine-rich repeat kinase 2 (LRRK2), Methylenetetrahydrofolate reductase[MTHFR] and DNMT1, MUC (mucin) genes, MUC15 promoter, NANOG promoters(Nanog Homeobox), NELF gene (nasal embryonic LHDH factor), OCT4 promoters, PROK2 gene (prokinetin 2), PTPN11 gene, RANTES [CCL5(C-C Motif Chemokine Ligand 5)], SHH, Sox2, SPRR2A, Telomerase reverse transcriptase (TERT), TMEM132C, TTG, VEGFB, VIP, WNT3A

IMMUNOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Antibodies for Aspergillus, Allergen-specific IgE Blood Testing, Antibody of Histoplasma, Antibody test of Legionella pneumophila , Antibody test of Mycobaterium tuberculosis, Antibody test of Pneumocystis jiroveci , IgE Testing, IgG Antibodies, IgM Antibodies, Pneumococcal Antibodies

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BIOCHEMICAL

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PARAMETERS TESTED @ VIRINCHI

Epidermal growth factor receptor (EGFR), CEA, Ferritin , SCCA, CA-50, TPA, CA 19-9, Cathepsin B, AFP, Prolactin, Cyfra 21-1, E-caderin, MMP-2, MMP-9, MMP-13, EGF, EGFR, Mesothelin , RANTES, MIP-1 , IGFBP-1, E-selectin, G-CSF, Cytokeratin 19, VCAM , MMP-3, Galectin-1 , Galectin-3 , TIMP-1, TIMP-2, Beta 2-Microgobulin

ELECTROPHYSIOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Ultrasonography-guided fine-needle aspiration cytology

HISTOPATHOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Sentinel node biopsy; Histological completeness of excision margins of oral cavity; Degeneration of the basal layer of the epithelium in oral lichen planus; Multinucleated osteoclast-like giant cells in a background of mononuclear cells

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Tumor thickness; Size and multiplicity of lymph nodes; Perineural invasion (PNI); Recurrent aphthous like ulceration; ulcerative lesions

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Streptococcus pneumoniae, Streptococcus pyogenes, Neisseria meningitidis, Haemophilus influenzae , Fusobacterium necrophorum, Corynebacterium diphtheriae, Bordetella pertussis, Neisseria gonorrhoeae, Chlamydophila pneumoniae, Mycoplasma pneumoniae, Bacillus anthracis, Rhinovirus, coronavirus, respiratory syncytial virus , parainfluenza virus , Herpes simplex virus, Adenovirus, Epstein–Barr virus (EBV), Influenza virus

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

CDKN2A, MGMT, DAPK, H1C1 , TGFBR2 , RARB, DCC, TIMP3, CCNA1, CDH1, CCND2, ESR , MINT31, AIM, p16, GSTM1, GSTT1, GSTP1, XRCC1, cytochrome P450 gene CYP1A1, p15 , RASSF1A

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and others. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Anti-p53; IL-6; IL-8; IFN-γ; IL-1R; IL-2R; IFN- a; IL-7; Streptococcal antibodies; influenza antibodies

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THROAT: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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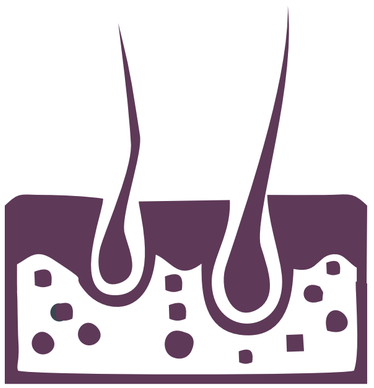

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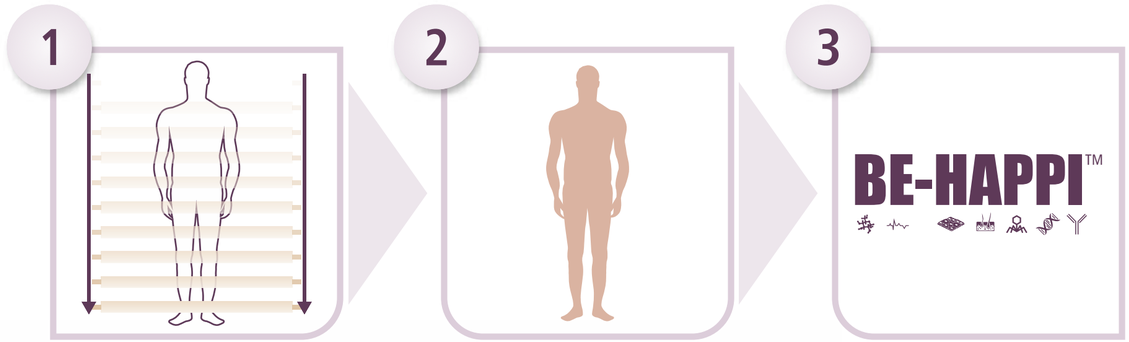

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

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SKIN: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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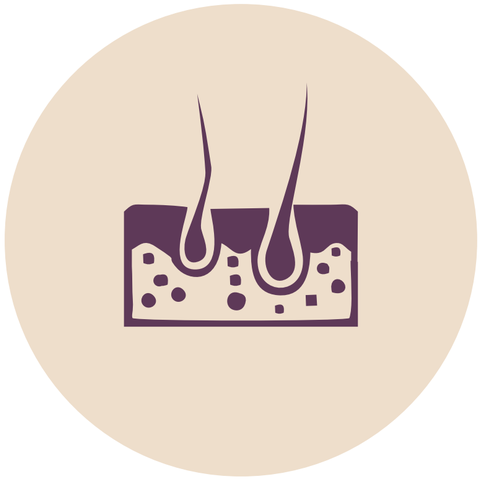

BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serves as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

B Cell Activating Factor (BAFF), Bcl2-associated X protein (Bax), Bcl-extra large (Bcl-xL), Blood Malondialdehyde, C reactive protein(CRP) , CCL11, CCL17, CCL18, CCL20, Cholesterol, Glutathione peroxidase, Heparin binding protein 17 (HBP-17), Human cGVHD, IL-4, IL-6, Inhibitor of DNA binding 4 (ID4), Interferon alpha(IFN-alpha), Interferon(IFN-c), Interferon(IFN-γ), Interleukin 12(IL-12), Interleukin 13 (IL-13), Interleukin 15(IL-15), Interleukin 17(IL-17), Interleukin 2(IL-2), Interleukin 22(IL-22), Interleukin 23(IL-23), Interleukin 23p19(IL-23p19), Interleukin 23p40(IL-23p40), Interleukin 33(IL-33), Interleukin 8(IL-8), Interleukins 6(IL-6), MHC class I chain-related protein A (MICA), Nerve growth factor(NGF), Oxidized low-density lipoprotein (Ox-LDL), Peptidase Inhibitor 3(PI3/elafin), Platelet-derived growth factor receptor(PDGFR), Polycomb complex group (PcG) proteins, S100 Calcium Binding Protein A11(S100A11) , S100 calcium binding protein A8(S100A8), S100 calcium-binding protein A2(S100A2), Thiobarbituric acid , Toll-like receptor 8 (TLR8), Triglycerides, Tumor necrosis Factor alpha(TNF-alpha)

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Skin electrode impedance, Skin electrical activity:, Skin conductance and skin potential-electrodermograph (EDG), Skin resistance-electrodermograph (EDG)

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

melanocytic nevi and melanomas-confocal microscope; nuclear pleomorphism; increased vascularity in the superficial dermal compartment; honeycomb-like signal-free structures; signal-free cavities in the upper dermis

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Candida albicans, Clostridium spp, Epidermophyton, Herpes simplex virus (HSV), Herpes zoster (shingles) , Human papillomavirus (HPV), Malassezia furfur, Microsporum, Mycobacterium leprae (M. leprae), Poxvirus, Staphylococcus aureus , Streptococcus pyogenes , Trichophyton

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and others. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Antibody to neutrophil cytoplasmic Antigens(ANCA), Anti-calpastatin Antibody , AntiNUCLEAR AntiBODIES TESTING, Anti-oxidised LDL Antibody, Candida albicans IgE, FTA-Abs test (fluorescence treponema Antibody absorption test), Immunoglobulin A (IgA) test, Lupus Anticoagulants(La) Antibody tests, Ro Antibody tests, Streptozyme, Tissue Anti-oxidised LDL Antibody, Trichophyton Ig E

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

skin vascular lesions-Optical coherence tomography; altered skin architecture-Optical coherence tomography; disarrangement of the epidermis and upper dermis-Optical coherence tomography; The icicle-shaped structures (Melanoma of skin)-OCT; solid lesions (BCCs or malignant melanomas)-high frequency ultrasound; changes in water content-Terahertz pulsed imaging; Measuring the mobility of water-MRI; 18F-FDG PET

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

7-dehydrocholesterol reductase(DHCR-7), ABCA12 gene mutations, ADAM metallopeptidase domain 17(ADAM17), Arachidonate 12-lipoxygenase, 12R type(ALOX12B), Arachidonate Lipoxygenase 3(ALOXE3), Ataxin 2-binding protein 1 (A2BP1), Bak, BCL7a, Bcl-X, BRN-2, C-C Motif Chemokine Ligand 22(CCL22), Connexins 26, Connexins 30, Cystatin A (CSTA) gene mutations, Cytochrome P450 Family 4 Subfamily F Member 22(CYP4F22), Dimethylarginine Dimethylaminohydrolase 2(DDAH2), Fas cell surface death receptor(FAS), Fibroblast growth factor receptor(FGFR), Filaggrin(FLG), Guanine nucleotide binding protein 15 (GNA15), H3K4 methyltransferase, Heat-shock proteins 27, Heat-shock proteins 60, HLA-Cw6, Interleukin 12 B(IL-12B), Interleukin 23R(IL-23R), keratin 16 (KRT16), Keratin Gene Screening, Membrane Bound Transcription Factor Peptidase, Site 2(MBTPS2) , Metaxin gene(MTX), Methylguanine methyltransferase (MGMT), Mitogen-activated protein kinase kinase 3(MAP2K3/PRKMK3), NIPA Like Domain Containing 4(NIPAL4), Pituitary adenylate cyclase-activating peptide-38(PACAP-38), Protein Tyrosine Phosphatase, Receptor Type G(PTPRG), Psoriasis Susceptibility 2(PSORS2), Ras-GTPase activating protein (GAP)-binding protein (G3BP), Sequence-Tagged Site(STS) Gene, Small inducible cytokine A2(SCYA2), Suppressor of cytokine signaling 3(SOCS3), Tet Methylcytosine Dioxygenase 2(TET2), Th1/IFN (CXCL10), TP73, Transglutaminase 1(TGM1)

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GASTROENTEROLOGY & HEPATOLOGY: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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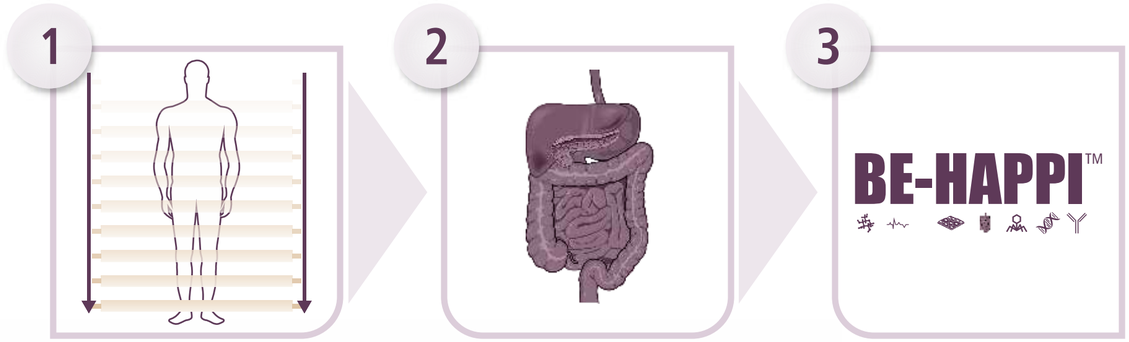

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN DISCOVERED

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LIVER: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies

PARAMETERS TESTED @ VIRINCHI

ACE,alanine aminotransferase (ALT),aldehyde dehydrogenase 1,ALDOB (ALSO CALLED AS ALDOLASE),Alkaline phosphatase (ALP,alkylphosphatidylcholine,Alpha-1 antitrypsin (A1AT),alpha-2 actin,Alpha-fetoprotein (AFP),Amylase,Amyloid P component,Argininosuccinate synthetase(ASL),Aspartate aminotransferase (AST),Bile acids,Bilirubin,calponin ,carbohydrate deficient transferrin,Complete blood count (CBC) ,Copper/ceruloplasmin,Creatine Serum Test,Cysteine proteases,Cytokines,Des-gamma-carboxy-prothrombin (DCP),Diacylglycerols Dihexosylceramide,Fatty acid ethyl esters,Fibrinogen alpha chain preproprotein,Free cholesterol, Fructose 1,

6-bisphosphatase,Gamma-glutamyltransferase (GGT),gluta thione S-transferase,glutamate dehydrogenase,HDL-C,Iron tests,isocitrate dehydrogenase,LDH,LDL-C,Lectin-reactive alpha fetoprotein (AFP-3), lysoalkylphosphatidylcholine, malate dehydrogenase,mitochondrial acetoacetyl-CoA thiolase,mitochondrial malate dehydrogenase,MMP-2monounsaturated form of palmitoleic acid (MUPA),pro-IL-18,pro-IL-1b,prolyl 4-hydroxylase,receptor protein kinases,regucalcin,serum albumin,Serum ferritin,Serum transferrin,TNF-R2,Total protein, transgelin,Triacylglycerol,trihexosylceramide,tropomyosin,tumor necrosis factor receptor 1 (TNFR1),Tumor necrosis factor-alpha (TNF-a),Vimentin

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems

PARAMETERS TESTED @ VIRINCHI

Auditory P300 event related potentials(P3ERP), Visual evoked potential for Hepatic encephalopathy

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy

PARAMETERS TESTED @ VIRINCHI

Apolipoprotein-AI, Glypican-3, Golgi Phosphoprotein 2, Human carbonyl reductase 2, Human cartilage glycoprotein-39 (Serum YKL-40), Hyaluronic acid, Isoenzyme aldehyde dehydrogenase II, Microfibril-associated glycoprotein 4, N-terminal propeptide of the procollagen III (PIIINP), Plasminogen, Protein disulfide isomerase precurser, Tissue inhibitor of serum metalloproteinase 1 (TIMP-1)

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Fat fraction, Diffusion, Inflammatory activity, Iron concentration, Textures

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including-bacteria, fungi, viruses, mycoplasma, and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Ascaris lumbricoides, Acinetobacter baumanii, Chlonorchis sinensis, Cytomegalovirus [CMV], Echinococcus alveolaris, Echinococcus granulosus, Entamoeba histolytica, Fasciola hepatica, Hepatitis A virus, Hepatitis B virus, Hepatitis C virus, Hepatitis D virus, Hepatitis E virus, Hepatitis G virus (rare), Stenotrophomonas maltophilia

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

17 kDa myosin light chain, ABCB4, Actin alpha 1 skeletal muscle protein, ALMS1, APC-1A, AT P 5 Al, ATP7B, Bcl2, Beta subunit methylenetetrahydrofolate dehydrogenase 1, BHMT, CAT, CDH13, CFTR, COL I, COL III, COL IV, COL V, CSPG2, Cyclin a1, Cytokeratin-18 (Ck18), DBCCR1, DH4, DH5, DHFR, DKC1, Eefla2, ER6Q, FAH, Fas, Foxa1, Foxa2, Foxa3, Foxl1, GALR2, GBE1, GSPT1, HFE, HFRP1, HIC1 , High-mobility group box-1 (HMGB1) protein, hMFAP 4, Homo sapiens p20 protein, HOX2A, IRF7, Lgr5, LINE, LIPA, Liver Glycogen Synthase gene (GYS2), LRP6, MMP-8, MMP-9, MT1A, MYOD1, p57KIP2, p73, PENK, PKD1, PNPLA3, PPAR Gamma, PRKCSH, PRO2619, PTEN, PTGES 2, RIP1, RIP3, SALL3, SEC63, SERPINA1, SLC25A13, TNF receptor-associated protein with death domain (TRADD), TNF-related apoptosis-inducing ligand receptor (TRAIL-R), WT1

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

ABO, Anti liver FABP antibody, Antibodies to Saccharomyces cerevisiae(ASCA), Anti-liver-kidney microsomal (LKM) antibodies, Antinuclear antibody, Anti-smooth muscle antibody , H chain H Igg B12, Hepatitis A antibodies, Hepatitis A Test (HAV-Ab IgM HAV-Ab IgG Anti-HAV), Hepatitis B antibodies, Hepatitis B Test (HBV Testsanti-HBc IgM), Hepatitis C antibodies, Hepatitis C Test (Anti-HCV HCV-PCR HCV-RNA), Hepatitis D antibodies, Hepatitis E antibodies, Immunoglobulin A, Immunoglobulin E , Immunoglobulin G, Immunoglobulin M

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LIVER: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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PANCREAS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

Adipocytokines,Amylase ,Angiopoietin 2,Antilactoferrin,Antitrypsinogen,C- peptide blood test,C reactive protein ,Calcium,Carbohydrate Antigen 19-9(CA19-9),Carboxypeptidase B,Carboxypeptidase B Activation Peptide (CAPAP),CEA (Carcinoembryonic Antigen),Chymotrypsin C(CTRC),Complete blood count (including white blood cell count),Cortisol Binding Globulin (CBG),Cytokeratin 18,Endothelin 1,Fecal fat test,Fibrinogen-Like Protein-2 (fgl-2),Glucose,Heat-shock protein 10,Hepcidin,High-density lipoprotein (HDL) cholesterol ,Hydroxy-eicosatetranoic acid(HETE),Hydroxy-octadecadienoic acid(HODE),IFN-gamma-inducible protein 10 (IP-10, CXCL10),Insulin blood test,Interleukin 1 beta(IL1 beta),Interleukin 11(IL-11),Isoamylase,Linoleic acid(LA),Lipase,Low-density lipoprotein (LDL) cholesterol,Macrophage Migration,Inhibitory Factor (MIF),Magnesium,Matrix Metalloproteinase-9 (MMP-9),Melatonin,MUC-1 Antigen (also called CA 15-3 Antigen),Murine pancreatic tumour Antigen,Oxidized fatty acid (OxFA),P16/CDKN2A(Cyclin Dependent Kinase Inhibitor 2A),Pancreatic elastase,Pancreatic secretory trypsin inhibitor(PSTI)/Serine protease inhibitor Kazal-type 1 (SPINK1),Phospholipase A2,Procalcitonin (PCT),Serum Intercellular Adhesion Molecule-1 (ICAM-1),Serum trypsin,Soluble Thrombomodulin (sTM),Soluble Triggering Receptor,Sweat (chloride),Trypsin Activation Peptide (TAP),Trypsin-Alpha-1-Protease Inhibitor Complex,Trypsinogen,Trypsinogen-2,Tumor necrosis factor alpha(TNF alpha),Vitamin C levels (ascorbic acid)

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Electrical activity bursting pattern of β-cell; Ionotropic membrane currents; Intracellular microelectrode recordings of membrane potential

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Increased interstitial fluid pressure- impediment to perfusion of the tumor,Intraductal growth of neoplastic mucin-producing cells,Intravenous (IV) secretin,Neoplasms (richly vascular),Obliterative Phlebitis and Other Vascular Lesions (AIP),Periductal inflammation in AIP,Storiform fibrosis in AIP,Synaptophysin

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Diffusion,Fat fraction,Inflammatory activity,Iron concentration,Textures

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Brucella,Campylobacter jejuni,Coxsackievirus type B,Enterococcus,Escherichia coli ,Helicobacter pylori ,Hepatitis B virus(HBV),Hepatitis viruses HBV,Klebsiella spp,Legionella pneumophila,Measles virus,Mumps virus,Nocardia,Porphyrmomonas gingivalis,Proteus,Pseudomonas spp,Rubella virus,Salmonella,Streptococcus faecalis,Y. pseudotuberculosis,Yersinia enterocolitica

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

Ataxia telangiectasia mutated(ATM),ATP-binding cassette sub-family A member 12(ABCA12),Cationic trypsinogen gene,CXCL5/ENA-78,p53 gene,Protease serine 1(PRSS1),Soluble CD73,Soluble E-Selectin (sES)

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Anti-A AntiBODIES,Anticarbonic Anhydrase-II,Anticarbonic Anhydrase-IV,Antinuclear Antibody (ANA),Antipancreatic secretory trypsin inhibitor,Diabetes-related (islet) autoantibody,Glutamic Acid Decarboxylase AutoAntibodies,Helicobacter pyroli Antibodies,Hepatitis B Antibodies,Insulin AutoAntibodies,Insulinoma-Associated-2 AutoAntibodies,Islet Cell Cytoplasmic AutoAntibodies,Plasminogen-binding protein Antibodies

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PANCREAS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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STOMACH: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

6 methylmercaptopurine (6MMP), Adenosine Deaminase, Albumin, Alkaline phosphatase, Amylase, Angiogenin, Apolipoprotein C, Apolipoprotein X (ApoX), Blood urea nitrogen, Calcium, Carotenoids including vitamin A, Catalase, CCR5, CD143, CD16, CD34, CD36, CD64, Chloride, Cholesterol, Cholesterol ester (CE), Chylomicron (CM), Chylomicron remnant (CM r), Circulating Basement-Membrane (BM) Fragments, Citrulline, Coiled-coil domain containing protein 67, Copper Blood (Cu Plasma or Serum), Co-proporphyrin, C-Reactive Protein (CRP), Cryptosporidium Antigen by EIA, CXCR3,Cystatin C and Cathepsin, Diacylglycerol (DAG), Diamine oxidase (DAO), D-lactate, Docosahexaenoic acid (DHA), Eicosapentaenoic acid (EPA), Elafin, Enzyme indolemine 2, Enzyme indolemine 3 dioxygenase (IDO1), ESR, Fecal bile acid, Fecal calprotectin, Fecal Fat, Fecal Lactoferrin, Fecal Lipids, Fecal Neopterin, Fecal S100A12, Fibro test(F2), FIT, Glucose, Hg, High-density lipoprotein (HDL), Homocysteine, Hypersensitive C Reactive Protein, IL-1, Il-10, IL1β, Il-2, IL23/17, Il-6, Immunity-related guanosine triphosphatase M (IRGM), Insulin-Like Growth Factors and Their Binding Proteins (IGFs and IGFBPs), L-arginine (L-Arg), Leucine-rich repeat kinase 2 (LRRK2), Lipase, Lipopolysaccharide-Binding Protein, Lipoproteins and Lipoprotein-Related Receptors, Low-density lipoprotein (LDL), Matrix metalloproteinase-9 (MMP-9), Mercury Poisoning,MMP13, monoacylglycerol (MAG), monounsaturated FA (MUFA), Mucosal Cytokine, Mucosal Indoleamine 2, 3 Dioxygenase-1, Neutrophil Gelatinase-Associated Lipocalin (NGAL), NF-kB, Nitric Oxide, Occult Blood Fecal Test, Osteoprotegerin (OPG), Peroxiredoxin-1 (PRX 1), phosphatidylcholine, phosphatidylethanolamine, phosphatidylinositol, phosphatidylserine, Phospholipases, PMS, Porphobilinogen PBG Test, Porphyrins Test, Potassium, Proteins, PUFA, Runt-related transcription factor 3, Serum substance P, Sodium, TGF, Total Testosterone, Transferrin (TF),Triacylglycerols (TAGs), Tumor necrosis factor-Alpha, Tyrosine kinase receptor sAxl, Urinalysis (Complete), Uroporphyrin, Vascular adhesion molecule-1,Very-low density lipoproteins (VLDL),Vitamin C

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Bradygastria ,Dysrhythmic Gastric electrical activity,Dysrhythmic slow wave propagations,Electrical control activity (ECA) and electrical response activity (ERA)-EGG,Electrical signals from GI smooth muscle-Gastroenterogram,Tachygastria ,Magnetic Fields :Spatial and temporal changes,Signal frequency,Signal Amplitude

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Degree of basal cell hyperplasia,Degree of papillary zone elongation,Density of neutrophil and eosinophil infiltration,Dysplasia

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Colon motility,Colon water content,Colonic chyme relaxometry,Colonic volumes,Gastric emptying,Gastric motility,Gastric secretion volume,Oro-cecal transit time,Small bowel motility,Small bowel water content,Whole gut transit

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Adeno virus,Bacillus cereus,Campylobacter,Campylobacter Pylori,Clostridium difficile,Clostridium perfringens,Coxsackie viruses,Escherichia coli,Giardia,Giardia Lamblia Direct Detection EIA),Helicobacter pylori,Rota virus,Salmonella,Shigella,Staphylococcus aureus,Treponema pallidum,Trichomonas vaginalis,Urea plasma urealyticum,Vibrio cholera

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

6 thioguanine nucleotides (6TGN) ,ACCA (Antichitobioside carbohydrate IgA),ACTA2 (Actin, Alpha 2),ACTG2 (actin, gamma 2),ADCY5 (Adenylate cyclase 5),AGTR1 (Angiotensin II Receptor Type 1),AGTR2 (angiotensin II receptor type 2),Anti-I2 Pseudomonas flourescens -associated sequence I–2,APC (Adenomatous polyposis coli),ATP1A2 (ATPase Na+/K+ transporting subunit alpha 2),Autophagy 16-like 1 (ATG16L1),AXIN2 (axin 2),AZU1 (Azurocidin 1),BabA2,BAT-25,BAT-26,CA19–9,Cadherin 1 (CDH1),CADM3,cagA,CALD1,CDKN2A ,Celiac Disease HLA DQ Association: HLA DQ2,Celiac Disease HLA DQ Association: HLA DQ8,c-KIT,CLCA4 (chloride channel accessory 4),CMA1 (chymase 1),CNTNAP1 9 (Contactin Associated Protein 1),COL11A2 9 (collagen type XI alpha 2 chain),COL6A6,DKK1 (Dickkopf-related protein 1),EDNRA (endothelin receptor type A),ELF3,EPCAM,ERBB2,ERK,FGFR1,GF1,GNAQ,GUCY1A3,GUCY1B3,HMHL1,Intercellular adhesion molecule-1,ITGA5,ITGA7,ITGA9,JAM2,KCNMA1 KCNMB1(potassium calcium-activated channel subfamily M regulatory beta subunit 1),KIND1,K-ras,MADCAM1,MAPK,MAPT,MEK,MGMT ,MLH1,MLH2,MONO-27,MRVI1,MSH2 ,MSH6 ,MYH11,MYL9,MYLK,NEGR1,NFASC (neurofascin), NOD2, NOX1, NPR2, NR-21, Nr24, NRAS, NRXN2, NRXN3, p16, p38, p53, PMS2, PDGFR b, PDGFRA, phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha (PIK3CA), PPP1R14A, PRKACB, PRKCB, PRKG1, Pseudomonas flourescens-associated sequence I–2 (Anti-I2),PTPRM,RAF,Raf kinase inhibitory protein (RKIP),RASSF1A and RASSF1B, RB, S100A12, SCNN1B, SCNN1G, SELP, SFRP1, SFRP2, Tenascin N (TNN), THBS4, TNFR1, TNFR2, Tp53, TUBB3, WNT5A

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

ALCA (antilaminaribioside carbohydrate IgG),Antibodies to Flagellin A4-Fla2 and FlaX,Antibodies to mannobioside (AMCA),Anti-C,Anti-Campylobacter Antibodies,Anti CD3,AntiL,Antineutrophil cytoplasmic antibodies (ANCAs),Anti-OmpC antibody,Antiparietal cell antibodies (APCA),Anti-Saccharomyces cerevisiae antibodies (ASCA),Anti-synthetic mannoside antibodies (AΣMA or AMCA),Celiac Disease Antibodies,Endomysial Antibody IgA,Flagellin (Anti-Cbir1),Gliadin Antibody Profile,Gluten Allergy IgE,H Pylori IgA Test,Helicobacter pylori Antibodies IgG,Helicobacter Pylori Stool Antigen,IgA,IgE antibodies,MMR,Pancreatic autoantibodies (PAB),Perinuclear antineutrophil cytoplasmic antibodies (pANCAs),Varicella Zoster Virus Antibodies IgG

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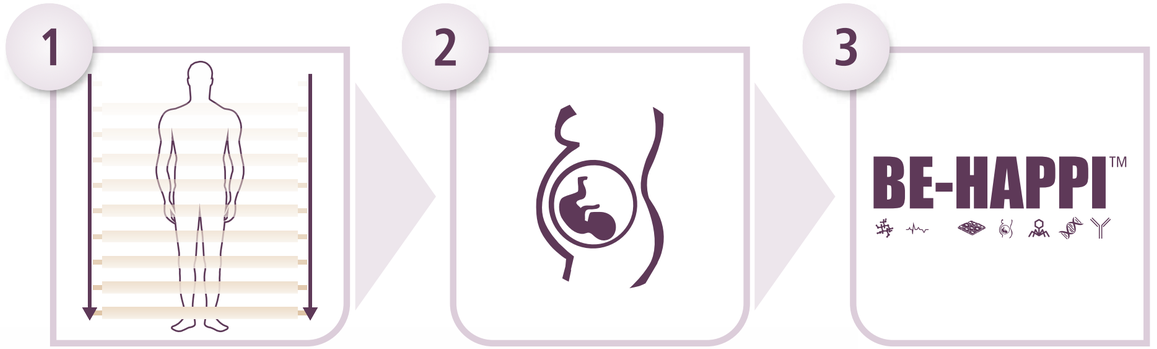

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serves as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

17-OHP 17 hydroxy progesterone, Activin, Alanine Amino Transferase (ALT), Albumin, Albumin/Globulin Ratio, Alkaline Phosphatase (ALP), Androgen, Androstenedione, Anti ZO-1, Anti-beta catenin, Anti-E-cadherin, ARF panel, Aspartate Amino Transferase (AST), Basophils, Bikunin, Bilirubin, Biogenic amines, Blood Type (ABO Grouping & RHO Typing), BUN (Blood Urea Nitrogen), BUN/Creatinine Ratio, Calcium, Cancer Antigen (CA) 15-3 Blood Test, Cancer antigen 125 (CA125), Carbon Dioxide, Casts, CBC with Differential Blood Test, Cervical mucus tests / Post coital test (PCT), Chloride, Cholesterol, c-Jun N-terminal kinase (JNK), Cleavage fragment of H4 (inter-a-trypsin inhibitor heavy chain), Comprehensive Metabolic Panel (CMP), C-Reactive Protein High Sensitivity (CRP HS), Creatinine, CRP, Crystals, D-dimer, DHEAS, Diglycerides, EGFR (epidermal growth factor receptor), Eosinophils, Epithelial Cells, Estimated Glomeyular Filtration Rate (eGFR), Estradiol, Estrogen, Female Hormone Panel, Follicle-stimulating hormone (FSH), FOLR1 (folate receptor alpha), Free fatty acids, Free Testosterone, Free Thyroxine (T4) Index, GH-Growth hormone, Globulin, Glucose, Glucose transporter-4 (GLUT4). Glutathione peroxidase (GPx), Glutathione-S-transferase (GST), Gonadotropin-releasing hormone (GnRH), Granulocyte colony-stimulating factor (G-CSF), Granulocyte-macrophage colony-stimulating factor(GMCSF), Haptoglobin-a (HP-a), H-cadherin, Hematocrit, Hemoglobin, High density lipoproteins(HDL), Human epididymis protein 4 (HE4), Human prostasin (PRSS8), Hydrogen peroxide (H2O2), Hypermethylated Death-Associated Protein Kinase (DAPK), Hypoxiainduced factor-1 (HIF-1), iFOBT, IL12p70, IL1b, IL-6, IL-6r, Inhibin, Insulin growth factor binding protein (IGFBP-1), Insulin receptor (InsR), Insulin receptor substrate 2 (IRS2), Insulin-like growth factor 2 (IGF2), Interleukin 8 (IL8), Ketones, Lactate, Lactate dehydrogenase A (LDHA), LH-human chorionic gonadotropin (hCG), Lipid Panel Blood Test, Lipophilic organochlorine, Low-Density Lipoprotein (LDL), Luteinizing hormone (LH), Luteinizing hormone/chorionic gonadotropin receptor (LHCGR), Lymphocytes, Macrophage colony-stimulating factor(M-CSF), Macrophage inhibitory factor (MIF), Malondialdehyde (MDA), MCJ, Mean Corpuscular Hemoglobin Concentration (MCHC), Mean Corpuscular Volume (MCV), Melatonin (N-acetyl-5-methoxytryptamine), Mesothelin, Metalloproteinase-8 (MMP-8), Metformin, MMP9, Monocytes, Monoglycerides, Mucus, N1-acetyl-5-methoxykynuramine (AMK), N1-acetyl-N2-formyl-5-methoxykynuramine (AFMK), Neutrophils, Nicotinamide adenine dinucleotide phosphate oxidase system (Nox), Nitrite, Nuclear factor kappa B (NF B), Occult Blood, Osteopontin, OVX1, Phallodin-TRITC, Phosphatidyl inositol 3-kinase (PI3K), Phosphodiesterase D4 (PDE4D4), Phospholipids, Platelet Count, Potassium, Pregnenolone, Progesterone, Protein kinase B, Protein Total, Quantitative hCG blood testing, Red Blood Cell Count (RBC), Red Cell Distribution Width (RDW), Rhodopsin, Serum lysophosphatidic acid (LPA), Sex hormone-binding globulin (SHBG), Sodium, Steroidogenic cytochrome P450 enzymes, Stromal cell-derived factor 1 (SDF-1), T3 Uptake, T4, Testosterone, TG triglycerides, Thyroid Stimulating Hormone (TSH), Transthyretin (TTR), Urobilinogen, Very Low-Density Lipoprotein (VLDL), Vitamin D 25-Hydroxy Blood Test, White Blood Cell Count (WBC), YKL-40

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Frontal EEG theta/beta ratio-ADHD disorder; Intra-uterine pressure-Electrohysterography; Pelvic floor muscle contraction-perineometer

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells to due to external stimuli or DNA level changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Calretinin, Cytokeratin 5, Cytokeratin 6, Cytokeratin-14, Cytokeratins 17, Degree of tubule formation-in breast cancer, Mitotic count -in breast cancer, Nuclear pleomorphism-in breast cancer, p-cadherin, Topoisomerase II alpha

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Apparent coefficient diffusion of pelvic region, AUCs for invasion of the bladder, rectum and pelvis, Cervical consistency index, Oxygenation, perfusion and tissue physiology of the tumour microstructure, Sagittal T2 image of Cervix, Volumetric bone mineral bone density

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Chlamydia and Gonorrhea testing, Chlamydia trachomatis, Cytomegalovirus, Gardnerella vaginalis, Haemophilus ducreyi, Herpesvirus, HIV retrovirus, Myco plasma hominis, Neisseria gonorrhoeae, Papillomaviruses (Papovaviruses), Treponema pallidum, Trichomonas vaginalis, Urea plasma urealyticum, Varicella-zoster virus(VZV)

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ABCG2 multidrug transporter, Activator protein-1 (AP-1), AKT1, ALDH1 (Aldehyde Dehydrogenase 1), ALMS genes, APC, Apolipoprotein A-I (apoA-I), ARID1A (the AT-rich interactive domain 1A), BBS genes, BORIS, BRAF, BRIP1, Cacna 1f mutations, Catalase (CAT), CD14, CDH1, CDK12, CDKN2A, CHEK2, CLDN4, CRB1 mutations, CS\MD3, CTNNB1 (beta-catenin), CYP19A1, CYP39A1, DICER1, EBP, E-selectin, FAT3, FBN1, FOXD4L4, FOXL2, GABRA6, Glutathione S-Transferase Polymorphisms (GSTM1), Glutathione S-Transferase Polymorphisms (GSTP1), Glutathione S-Transferase Polymorphisms (GSTT1), Growth arrest-specific 6 (Gas6), GTF2A1, HAAO, High mobility group AT-hook 2 (HMGA2), Homeobox A10 gene (HOXA10), HOXA9, HOXAD11, ICAM-1, Kallikrein (KLK), KHSRP, KRAS, MAL, MLH1, MRE11A, MSH2, MSH2, mtDNA mutations, NF1, NFAT5, Nibrin(NBN), NPHP genes, OAT gene, OPCML, p14ARF, p15, p16, PALB2, PARK2, Pentraxin 3 (PTX3), PIK3CA, PMS2, RAB, RAD, RAD50, RAD51C, Rad51D, RAN, RANTES, RAP, Ras-related protein Rab-5B (RAB5B), RB1, RHEB, RHO, RUNX3, SDF-1 SNP 801G/A, SFRP5, SNGG (synuclein-Ɣ): **encoding an activator of the MAPK and Elk-1 signaling cascades, SNP -463G/A, STK11, Synaptotagmin I (SYT1), TFPI2, USH1G gene**

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and others. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Chicken Pox Titers, Hepatitis A Total (IgM - IgG), Hepatitis B Immunity Test, Hepatitis B Surface Antibody, Hepatitis C Antibody, Herpes 1&2 IgG Abs, HIV 1/2 Antigen/Antibody, IgM Serum, MMR Antibodies, Syphilis RPR, Varicella Zoster Virus Antibodies IgG

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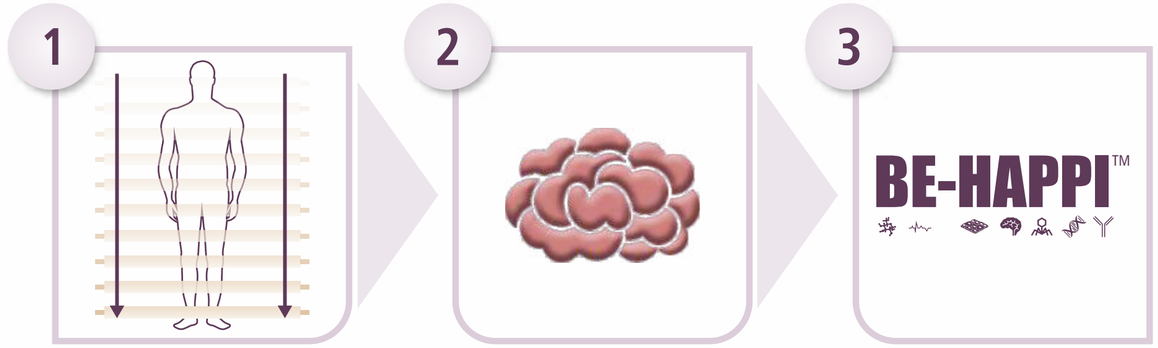

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN SYSTEM DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

3-nitrotyrosine, acetylcholine, acetylcholinesterase (AChE), Acetyl-CoA acetyltransferase (ACAT-1), Adrenocorticotropic hormone (ACTH), Alpha Synuclein, Alpha-ACT (Anti chymotrypsin), Apolipoprotein A-IV, Apolipoprotein E [APOE], Apoliprotein A-1, C reactive protein (CRP), Catechol-Omethyltransferase, Cathepsin L preproprotein, Cholesterol, Creatine kinase B-type (CKB), Cystatin B, Dihydropyrimidinase-like 2 protein, Doublecortin, Enolase, Estradiol , F2isoprostanes, Fatty acid binding protein 3 (FABP3), Fatty acid binding protein 5, Fatty acid binding protein 7, Folic acid, Follicle stimulating hormne, Free T3,T4, Galectin-1, Gelsolin, Glial fibrillary acidic protein and its breakdown products(GFAP-BDP), Glial fibrillary acidic protein(GFAP), Glucogen synthase kinase 3, Glutamine synthetase, Glutathion S-transferase chain A, Glycerophosphocoline, Glycoprotein 130(Gp-130), Gonadotropin, Growth Hormone(GH), Haptoglobin, Hemeoxygenase 1, Hemopexin, Hp fragments, Hyperphosphorylated tau, Hypocretin, Insulin like growth factor, Iron regulating protein(IRP-2), Laminin, Leutinising hormone, Myelin basic protein, Nerve growth factor(NGF), Nestin, Neurocalcin, Neurofilament H(NF-H), Neurofilament proteins (NF), Neuroprostanes, Neurosin, PGF-Tau, Phosphocholine, Phosphorylated Tau(P-Tau), Phosphoserine phosphatase, Pituitary hormone insufficiency, Protein kinase C, Proteolipid protein, Sulfatide, Testosterone, Thyroid stimulating hormone(TSH), Tissue plasminogen activator (TPA), TTG (Tissue transglutaminase), Tumor necrosis factor alpha(TNF-alpha), Vascular endothelial growth factor(VEGF), Vitamin A, vitamin B12, Vitamin B6, Vitamin E, Beta 2 microglobulin

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Brain stem lesion, Burst dicharge patterns-EMG, Coherence, Event-related oscillations (EROs), Event-related potentials (ERPs), Event-related spectral perturbances (ERSPs), Evoked potential by EEG, Nerve compound action potentials-Electroneuronography, Spasticity-EMG

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Brain biopsy, Meningeal biopsy , p-tau, Synaptophysin

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Cortical thickness, CSF dynamics, Gray matter volumetry, Iron concentration, Lesions segmentation, Myelin mapping

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ALZAS, 5-Hydroxytryptamine Receptor 5A(HTR5A), Amyloid precursor protein (APP) , Anterior pharynx defective 1 homolog A (APH1A), Aβ, Aβ40, Aβ42, Aβ42:Aβ40, Beta defensin 6/7, Brain-derived neurotrophic factor(BDNF), Bromodomain Containing 1(BRD1), Calpactin I light chain, CAMP responsive element binding protein 1(CREB-1), Caspase-1, CLOCK, Collapsin response mediator protein family(CRMP), Colony stimulationg factor receptor 2 alpha(CSF2RA), Copine I, CREB-binding protein (CBP/p300), Cryptochrome Circadian Clock 1(CRY1), CSF A42, c-Tau, Disrupted in schizophrenia 1(DISC1) protein, DJ-1 protein, DNMT1, Elongator protein 3 (ELP3), Endothelial monocyte activating polypeptide II precursor (EMAP II), Fibroblast growth factor 14(FGF14), Fibroblast growth factor 4, Growth Associated Protein 43 (GAP43), Heat shock protein 27(Hsp27), Heat shock protein 60(HSP60), Heat shock protein 70(HSP70), Huntingtin (HTT) protein, IL1 gene complex, IL-6 receptor, Interleukin 1 Receptor Antagonist(IL1RN), Interleukin 2 receptor subunit alpha(IL2RA), Leucine-rich repeat kinase 2(LRRK2), Methylenetetrahydrofolate reductase[MTHFR] , Microtubule-associated protein tau (MAPT), NALP-1, Neuregulin-1, N-myc and caldesmon (l-CaD), NPAS2, PARK7, PARKIN, Phosphoprotein enriched in astrocytes-15(PEA-15), Presenilin 1[PSEN1] , Profilin-2, Prohibitin , PTEN-induced putative kinase 1(PINK-1), Ras-related C3 botulinum toxin substrate 1(Rac1), RE1-silencing transcription factor (REST), RhoA, RhoA GTPase, Secreted protein acidic and rich in cysteine(SPARC), Secretory Ca2+-dependent phospholipases A2 (sPLA2), Sirtuin 2(SIRT2), SPARC-like protein 1(SPARCL1), SRC family associated phosphoprotein, ß-site APP-cleaving enzyme 1/2(BACE1/2), ST13RNA, TAR DNA-binding domain protein (TDP-43) , Tau protein, Telomerase reverse transcriptase (TERT), Transforming growth factor beta(TGF-Beta), Tubuline-specific chaperone A, Tumor necrosis factor alpha receptor(TNF-alpha receptor), UCH-L1, VEGFB, Visinin-like 1(VLP-1), Zinc finger BED-type containing 4(ZBED4), αII-spectrin breakdown product 120(SBDP-120), αII-spectrin breakdown product 145(SBDP-145), αII-spectrin breakdown product 150(SBDP-150), α-synuclein(SNCA)

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Borrelia burgdorferii, Clostridium tetani, Cytomegalovirus (CMV), Epstein-Barr virus, Haemophilus influenzae, HIV, Human herpesvirus-6 (HHV6), Mycoplasma species:M. fermentans, Naegleria fowleri, Neisseria meningitidis, Polio virus, Rabies virus, Salmonella cholerae, Salmonella typhimurium, Streptococcus pneumoniae

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Anti cardiolipin Antibody,Anti-nuclear Antibody, Anti-B Antibodies, Antithyroid Antibody, Clostridium tetani Antibodies, Galactocerebroside Antibodies, Glial fibrillary acidic protein(GFAP) Antibodies, Myelin associated glycoprotein Antibodies, Myelin oligodendrocyte glycoprotein Antibodies, Salmonella cholerae suis Antibodies, Salmonella typhimurium Antibodies

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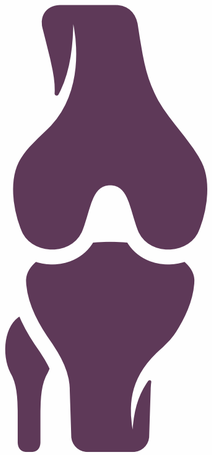

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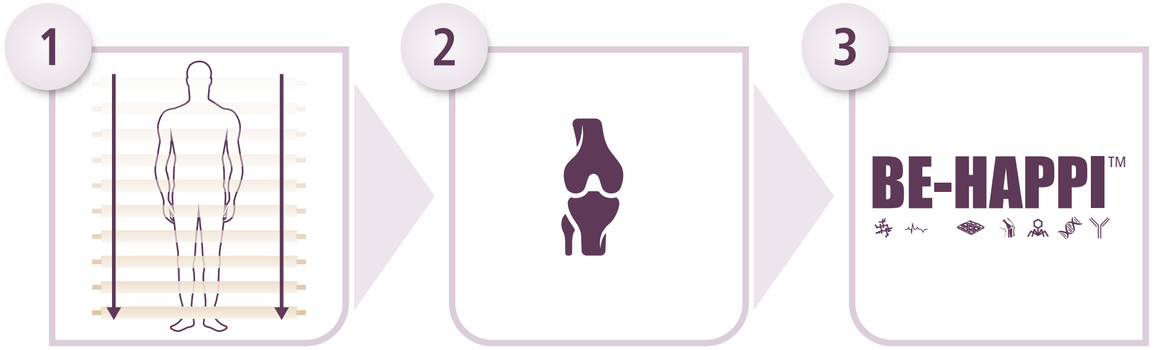

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BIOCHEMICAL

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PARAMETERS TESTED @ VIRINCHI

5-HT(5-hydroxytryptamine), Ammonia, ASPN (asporin) , Beta-myosin heavy chain (MYH11), Bradykinin, BST2(Bone Marrow Stromal Cell Antigen 2), C2C, Cartilage oligomeric matrix protein (COMP), Chondroitin sulphate 846 (CS846) , CIIM, Citrullinated protein (CP), Coll2-1, Coll2-1NO2, Cortisol, Creatine Kinase, CRP, C-telopeptide collagen II, DeamidatedCOMP (D-COMP), ESR, Free hydroxyproline, Glucosyl-galactosyl pyridinoline, Glutathione (GSH), Glutathione peroxidase (GTX), HDL-high density level cholesterol, Hyaluronic acid, IL-12(Interleukin -12), IL1R2(Interleukin 1 Receptor Type 2), IL-3(Interleukin-3), IL-4(Interleukin-4), IL6(interleukin -6), Isoprostanes (F2-isoP), Keratan sulphate, Lactate , Lactate dehydrogenase (LDH), LDL-low density level cholesterol, MMP9(matrix metalloproteinase 9), Nerve growth factor (NGF), N-oleoylethanolamine, N-palmitoylethanolamine (PEA), N-propeptide of collagen I, N-stearoylethanolamine (SEA), Oxipurines, P5CS (pyrroline 5 carboxylate synthase), PIIANP(Type II A Collagen N-Propeptide), PIICP (Procollagen II C propeptide), Protein carbonyl, PYCR1(pyrroline- 5- carboxylate reductase 1), pyruvate, Rheumatoid factor(RF), Serum PINP, Substance P, Thiobarbituric acid reactive substances (TBARS) , Triglycerides

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Muscle function by recording muscle activity-Surface EMG, Fine wire recordings in muscle-Intramuscular EMG, Miniature end-plate potentials, Nerve conduction studies (EMG) : Latency, Conduction velocity, Amplitude, Nerve conduction velocity (NCV)

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Carbonic anhydrase type 3, Muscle Biopsy: Atrophic angulated myofibers, Target fibers, Nuclear clumps, Myogenin (myogenic factor 4), Myopathic muscle biopsy: Endomyisal fibrosis, Moth-eaten fibers, Eosinophilic inclusions, Ragged red fibers , Soft tissue lesions , Osteoclast-rich lesions, Synovial Biopsy :, Blood vessel proliferation, Macrophage cell infiltrates

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

2D and 3D fractal dimension, Bone marrow lesion (BML) size, Bone marrow lesion volume, Bone quality score, Bone shape, Cartilage morphology and attrition , Changes in cartilage (morphometry), Delayed gadolinium enhanced MRI of cartilage, Effusion, FSA, JSW (X), Mechanical resistance and elasticity, Medial tibiofemoral compartment (MTFC) joint space narrowing (JSN), Meniscus morphology, Minimum JSW, Multi-voxel MRS (IMCL/EMCL ratio), OARSI JSN, Osteophyte volume, qBOLD (muscle oxygenation), QuAntitative trabecular morphometry, Sub-chondral bone, Synovial inflammation using diffusion-weighted imaging , Synovitis, Trabecular number, Trabecular spacing , Trabecular thickness, Volumetric quAntification

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

o ADAMTS2(ADAM metallopeptidase with thrombospondin type 1 motif 2), ADAMTSL4(ADAMTS like 4), AIM2, alpha-actin -2(ACTA2), ANO5(anoctamin 5), CAPN3(Calpain 3), CAPN8(Calpain 8), CD9(CD9 Molecule), COL11A1 (collagen XI Alpha1) , COL1A1(collagen typeI Alpha1), COL1A2(collagen type I alpha 2 chain), COL5A1(collagen type V alpha 1 chain), COL5A2(collagen type V alpha 2 chain), collagen-repair marker TIMP-1, CSF3R(Colony Stimulating Factor 3 Receptor), CTGF(Connective Tissue Growth Factor), CTX-II(Human Cross Linked C-Telopeptide Of Type II Collagen), CX3CR1(C-X3-C Motif Chemokine Receptor 1), CXCL12(C-X-C Motif Chemokine Ligand 12), DLX3(Distal-less homeobox3), DPP4(Dipeptidyl Peptidase 4), DR3, DYSF(dysferlin), EGF(epidermal growth factor), FGF7(Fibroblast Growth Factor 7), FGFR3(Fibroblast Growth Factor Receptor 3), Fibuline-3 fragments (Fib3-1 and Fib3-2), FKRP(Fukutin Related Protein), GDF5 (growth differentiation factor 5), GM-CSF(Granulocyte-macrophage colony-stimulating factor), Helix-II, HOX, HOXB9(HomeoboxB9), IFI44L(Interferon Induced Protein 44 Like), IFIT1(Interferon Induced Protein With Tetratricopeptide Repeats 1), IFIT3(Interferon Induced Protein With Tetratricopeptide Repeats 3), IFNGR2(Interferon Gamma Receptor 2 (Interferon Gamma Transducer 1)), IL6R(Interleukin 6 Receptor), LTBP-2 (latent transforming growth factor beta binding protein 2), MAP3K5(mitogen activated protein kinase kinase kinase 5), MCP-1(Monocyte chemoattractant -1), MCP-3(Monocyte Chemotatic Factor-3), MED12(Mediator Complex Subunit 12), MEFV(MEFV, pyrin innate immunity regulator), MIP-1Beta (macrophage inflammatory protein 1 beta), MMP20(matrix metalloprotenaise 20), MX1(MX Dynamin Like GTPase 1), NOTCH1, PECAM1 (Platelet and Endothelial Cell Adhesion Molecule 1), RASGRF2, RIN2 (Ras and Rab interactor 2), RUNX(Runt Related Transcription Factor), sarcoglycan alpha (SGCA), sarcoglycan beta (SGCB), sarcoglycan delta (SGCD), SKT(Sickle tail) , STAT1(signal transducer and activator of transcription1), TGFBR(Transforming growth factor beta receptor), TGFBR2 (Transforming growth factor beta receptor 2), THBS2(thrombospondin 2) , TIINE, TIMP2(TIMP Metallopeptidase Inhibitor 2), TRIM22(Tripartite Motif Containing 22), uCTXI, uNTXI, UPF3B(UPF3 Regulator Of Nonsense Transcripts Homolog B (Yeast)), USP18(Ubiquitin Specific Peptidase 18), WISP3(WNT1 Inducible Signaling Pathway Protein 3), XPO6(exportin -6), YKL-40 (Chitinase-3-like protein 1 (CHI3L1))

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Alphaviruses, Borrelia burgdorferi, Epstein-Barr virus (EBV), Fusobacterium spp, Haemophilus influenzae , Human parvovirus B19, Neisseria gonorrhoeae, Neisseria meningitidis, Pasteurella multocida, Peptostreptococcus magnus, Propionibacterium acnes , Serratia marcescens, Spirillum minus, Staphylococcus aureus, Streptobacillus moniliformis, Streptococcus pyrogenes

IMMUNOLOGICAL

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PARAMETERS TESTED @ VIRINCHI

Antibodies to MPO(Myeloperoxidase), Antibodies to PR3, Anti–cyclic citrullinated peptide (CCP) Antibodies, Anti-extractable nuclear Antigen (Anti-ENA), Anti-Mi2 Antibodies, Antineutrophil cytoplasmic Antibodies (ANCA), Antinuclear Antibodies, Anti-SRP Antibodies , Anti-SSA Antibodies , Anti-SSB Antibodies , HIV Antibodies, IgG immunoglobulin

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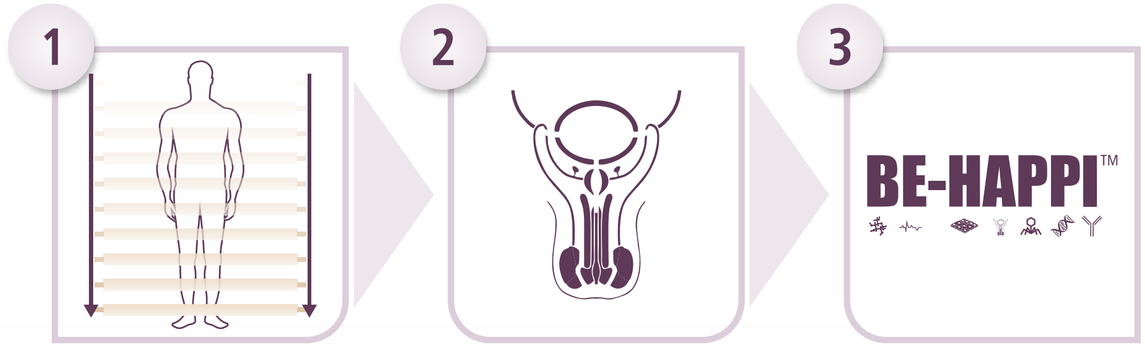

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PARAMETERS TESTED @ VIRINCHI

Alanine Amino Transferase (ALT), Albumin, Albumin/Globulin Ratio, Alkaline Phosphatase (ALP), Alphafetoprotein(APF), Aminopeptidase A, Ammonia, Aquaporin-1, Aspartate Amino Transferase (AST), Basic Metabolic Panel, Bilirubin, Bladder tumor Antigen (BTA), Blood Urea Nitrogen (BUN), BUN/Creatinine Ratio, C reactive protein(CRP) , Calcium, Carbon Dioxide, Carnitine, Casts, CD133, Chloride, Comprehensive Metabolic Panel, copeptin (CPP), Creatinine Clearance (24 Hour Urine and Blood), Crystals, Cystatin C, Decanoylcarnitine, Elastase-a1 -Antitrypsin complex E-a1 -Pi, Epidermal growth factor(EGF), Epithelial Cells, Erythropoietin Test, Estimated Glomerular Filtration Rate (eGFR), Fetuin A, Fluoride, Globulin, Glomerular Filtration Rate(GFR), Glucose, Glutarylcarnitine, Glycerophosphocholine, GP51 = glycoprotein 51, Hematocrit, Hemoglobin, Heparin binding protein, High density lipoprotein(HDL), Interferon-gamma(IFN gamma), Ketones, Linoleic acid, Lipid Panel, Liver fatty acid binding protein, Macrophage inflammatory protein (MIP- 1; CCL4), Macrophage inflammatory protein(MIP-1β), Magnesium, Mercury Poisoning, Microalbumin, Microalbumin: Creatinine Ratio, Mucus, Myopodin, N-acetyl-β-(D)-glucosaminidase (NAG), Nitrite, Nuclear matrix protein 22 (NMP22), Occult Blood, Oleic acid, Osmolality, Blood, Osmolality, Urine, Palmitic acid, Palmitoyl sphingomyelin, Parathyroid Hormone, Intact, Phosphorus, Platelet-derived endothelial cell growth factor/thymidine phosphorylase, Porphobilinogen PBG Test, Porphyrins Test, Potassium, prostaglandin E2 (PGE2), Protein and Creatinine, Random Urine, Protein, Total, Red Blood Cells (RBC), Renal Function Panel (Kidney Function Test), Sodium, Soluble triggering receptor expressed on myeloid cells-1, Sphingomyelin, TNF-α=tumor necrosis factor-α, Triglyceride, Urinalysis , Urinary interleukin-6 (uIL-6), Urine endothelin-1 (ET-1), Urine migration inhibitory factor, Urobilinogen, uromodulin, Uroplakin III, Vascular endothelial growth factor (VEGF), Vasorin, White Blood Cells (WBC), α-1 microglobulin/serum prostatic Antigen, α2-macroglobulin

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Detrusor–sphincter coordination, Electromyography of external urethral sphincter, Genital sympathetic skin response (SSR), Urethral sphincter and/or pelvic floor muscle activity

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Characteristic atypical stromal cells in fibroepithelial polyp, Endosalpingiosis in muscularis propria, Pseudoinfiltrative pattern in Nephrogenic adenoma of urinary bladder(NAUB), Von Brunn's nests in the lamina propria

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Apparent Diffusion Coefficient, Bladder outlet anatomy - Intravesical prostatic protrusion (IPP) USG, Bladder outlet anatomy - Prostatic urethral angle (PUA), Bladder wall Anatomy, Degree of water diffusion, Detrusor wall thickness (DWT) / Bladder wall thickness (BWT), Diffusion Weighted Imaging (DWI) of Prostate, DW-MRI of benign lymph nodes, Dynamic Contrast Enhanced Uptake (DCE) MRI of Prostate, MR spectroscopy imaging pf Metabolites, Permeability surface area product, Plasma Flow, Plasma Mean Transit Time, Plasma Volume , T2 - weighted imaging of Prostate, T2WI Bladder Imaging, Vascular density & Diameter

PATHOGEN SCREENING

Many physiological processes and features such as respiration, changes in growth rate, feeding, excretion, age, energy expenditure, vital signs, cognitive function, etc. are simple to complex measurable indicators and serve as valuable tools to evaluate the impact of either external or internal agents on the physiological processes.

PARAMETERS TESTED @ VIRINCHI

Candida, Chlamydia, Citrobacter, Enterococci , Escherichia coli, Essential STD/HIV testing package, Hep B Panel with Qual Hep B S abs, Klebsiella , Mycoplasma hominis, Neisseria gonorrhoeae, P aeruginosa , Proteus mirabilis, S aureus , Salmonella species , Staphylococcus saprophyticus, Trichomonas vaginalis

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ABMP, ADAM Metallopeptidase Domain 10(ADAM10), APC a, ATF3, CA10, CEP290, CREBBP, CXCR1, CXCR2, DBC1, DKK3, DKP4, E-cad, EDNRB, EOMES, Eotaxin (CCL11), EYA1, FRAS1, GALNT1, GATA3, GLI3, GLIS2, GPC3, Heparin binding growth factor-like growth factor(HB-EGF), HNF1b, HOXA9, HSPA1B, HSPB9, h-TERT, HYAL1, Hypoxia-inducible factor-1-Ⓐ, IGFBP3, IRF8, JAGGED1, KAL1, MKS1, MKS3, MLL3, MMP-9/TIMP-2, Monocyte chemotactic protein-1(MCP-1 /CCL2), MYO3A, NEK8, NID2, NKX6-2, NPHP6, NPHP8, NPTX2, NPY2R, p14, PAX2, PEX1, PKHD1, PMF1, PODXL, POU4F2, PROK2, PROK2R, RARB, RASFF1A, RPGRIPIL, SALL1, SALL4, SDCCAG8, SFRP1, SFRP4, SFRP5, SIGIRR, SIX1, SIX5, SOX11 or PENK, SOX9, TACSTD2, TBX3, TERT a, TERT b, TIRAP, TLR1, TLR2, TLR4, TLR5, TMEM67, TNFRSF25, TRAM, TRIF, TTC21B, TWIST1, VDAC1, VIF-1, VIM, ZNF154

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Anti-human gamma globulin, Fimbria-specific or D-mannose-specific Antibodies, Hepatitis C Antibody, Herpes 1&2 IgG Abs, HIV 1/2 Antigen/Antibody, Humoral Antibodies, Secretory IgA, Syphilis RPR

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BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

Albumin serum, Alkaline phosphatase serum, Additional Semen Tests, Aspartate Aminotransferase (AST or SGOT), Ammonia, Alanine Aminotransferase (ALT or SGPT), Apolipoprotein O, A/G Ratio, ATP synthase subunit g, Betamicroseminoprotein (MSMB), Bilirubin total, Biochemical analysis of semen , Blood Type (ABO Grouping & RHO Typing), BUN, BUN/Creatinine ratio, Calcium serum, Calgranulin-B, Carbon dioxide total, CBC with Differential (Complete Blood Count CBC), Chloride serum, Cholesterol total, Cholesteryl ester (CE), Chromogranin-A, Complete Blood Count (CBC), Comprehensive Metabolic Panel (CMP), C-Reactive protein Cardiac, C-reactive protein high sensitivity cardiac risk assessment (CRPhs), Creatinine serum, Cystatin C, Cystatin M, Cystatin S, Cystatin SA, Cytochrome c oxidase, Defensin, Dehydroepiandrosterone Sulfate (DHEAS), Early prostate cancer antigen-2 (EPCA-2), eGFR, Elastase , Electron-transfer-flavoprotein: beta polypeptide, Endoglin, Enoyl-CoA hydratase, Eosonophils, Eosonophils (absolute), Estradiol, Estradiol Ultrasensitive test, Fibrinogen, Filamin-B, Follicle stimulating hormone (FSH) , Free fatty acid (FFA), Free Mono- unsaturated fatty acids (MUFA), Free Poly-unsaturated fatty acids (PUFA), Free T3, Free Testosterone, Globulin total, Glucose serum, Glutathione S-transferase, HDL cholesterol, Heat shock protein 1, Hematocrit, Hemoglobin, Hemoglobin A1c, Hexosylceramide (HexCer), Homocysteine, Human Growth Hormone (hGH)/Growth Hormone (GH), IGF-1 (Insulin Like Growth Factor), Immature granulocytes, Immature granulocytes (absolute), Interleukin 8 (IL-8), Interleukin-10, Interleukin-6 , Kallikrein proteases-PSA, Ki-67, LAT1 (CD98), LDL cholesterol Cal, Lipid Panel, Lipocalin-1, Luteinizing hormone (LH) , L-xylulose reductase, Lymphocytes, Lymphocytes (absolute), Lyso-phosphatidylcholine (LPC), Lyso-phosphatidylethanolamine (LPE), Lyso-phosphatidylinositol (LPI), Lyso-phosphatidylserine (LPS), Lysozyme-like protein 4 precursor, Macrophage Migration Inhibitory Factor , MCH, MCHC, MCV, Mesencephalic Astrocyte-Derived Neurotrophic Factor, Mitochondrial pyruvate carrier 1-like Synaptojanin-2 Binding Protein, Monocytes, Monocytes (absolute), Nerve growth factor, Neuron-specific enolase, Neutrophils, Neutrophils(absolute), Nucleoside Diphosphate Kinase, Peroxidase-positive leukocytes , Peroxiredoxin, Phosphatidic acid (PA), Phosphatidylcholine (PC), Phosphatidylethanolamine (PE), Phosphatidylglycerol (PG), Phosphatidylinositol (PI), Phosphatidylserine (PS), Phosphoglycerate mutase 1, Platelets, Potassium serum, Profilin I, Progesterone, Prolactin, Prolactin-induced protein (PIP) , Prostate and testis expressed protein 1 precursor, Prostate-specific antigen (PSA), Prostate-specific membrane antigen (PSMA), Prostatic acid phosphatase (PAP), Protein kinase C inhibitor, Protein S100-A14, Protein total serum, RBC, RDW, S100 Protein, Semen analysis, Semen culture , Semen fructose , Semenogelin, Serine protease (kallikrein-3), SOD3 extracellular superoxide dismutase, Sodium serum, SP-10: a testis-specific acrosomal protein, Sphingomyelin (SM), Stefin B (Cystatin B), Succinate dehydrogenase, Testosterone total, Thyroid Panel, TNF receptor-associated factor 6, E3 Ubiquitin protein ligase, Total cholesterol/HDL ratio, Transforming growth factor-β, Triacylglycerol, Triglycerides, TSH, Uric Acid, Urinalysis , Urokinase-type plasminogen activator system, Vital staining , VLDL cholesterol Cal, WBC, α1-antichymotrypsin (ACT), endogenous protease inhibitor, α2-macroglobulin (A2M), α-Methylacyl-CoA racemase

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Degree of CNS insult-Somatosensory Evoked potentials (SSEPs), Changes in sweat gland activity-Sympathetic skin response, "sympathetically mediated electrical activity-Corpus Cavernosum EMG", Polysynaptic reflex-Evoked Cavernous Activity of penis, Penile nerve conduction velocity (penile neuropathies), Bulbocavernosus reflex response, Somatosensory evoked potential (SSEP)-electrical stimulation of the penis

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

AFP, Amplification of 12p, CD30, GPC3, OCT3/4, PLAP, POUF1, Stem cell factor receptor (c-KIT), Telomerase

ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Varicocoeles-Scrotal ultrasound, Epididymal abnormalities-Scrotal ultrasound, Structural penile abnormalities-Penile ultrasound, Malfunction of the venous occlusive mechanism-Penile ultrasound, Arterial inflow-Penile ultrasound, Detection and characterisation of prostatic cysts-MRI, Dilatation in the proximal seminal duct-Scrotal US, Testicular volume-testicular US, Patency of the seminal tract-vesiculodeferentography, Intratesticular cysts-testicular US

PATHOGEN SCREENING

Many physiological processes and features such as respiration, changes in growth rate, feeding, excretion, age, energy expenditure, vital signs, cognitive function, etc. are simple to complex measurable indicators and serve as valuable tools to evaluate the impact of either external or internal agents on the physiological processes.

PARAMETERS TESTED @ VIRINCHI

Chiamydia trachomatis, Gonorrhea culture, Hepatitis B, Hepatitis C, Herpes simplex virus (HSV), Human Immunodeficiency Virus (HIV), Human papillomavirus (HPV), Neisseria gonorrhoeae, Trepanoma pallidum, Trichomonas vaginalis

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

B7-H3 (Cd276), ACPP protein, ADAM19, ALB, BRCA1/BRCA2, CACNA2D1, Calmodulin 3, CD59, CDNK2A, Cofilin 1(CFL1), CSRP2 , CST4 , CTAM, DNMT3A2, EN2, ERG, EZH2, HOXB13, KIAA1143, KLF12, LINE-1, Macrophage inhibitory cytokine-1 (MIC-1), Membrane-associated progesterone receptor component 2, MGMT, MIP-1α, MUT, P25/26, PCA3, PCDH17, TCF21, PDE11A, PSCA, PSF1, PSGR, PTGS2, RAB11B, Ras-related protein, RASSF1α, RPRM, SAMSN1, SERPINA1 (ALPHA-1-ANTITRYPSIN), SERPINA5, SERPING1, SERPINF1, SFRP1 , SLC18A2, SPAST (Spastin), Sperm protein associated with the nucleus on the X chromosome B/F, Sperm protein associated with the nucleus on the X chromosome C , Sperm protein associated with the nucleus on the X chromosome D, SPOP (speckle-type POZ protein), SPRY4, STX18 (Syntaxin 18), SUX2 , Testis-Specific Histone Variant, TIG1, Tissue inhibitor of MMPs (TIMP 1, 2), TMEM204, TMPRSS2:ERG, TRPM4, XPO6, Y chromosome DNA (Yc DNA), ZAG, ZNF671

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

Antibody M IgM Serum Quantitative IgM Serum, Antihuman sperm monoclonal antibody MHS-5, Chicken Pox Titers VZV, Hepatitis A Total (IgM - IgG), Hepatitis B Immunity Test Hep B Titer, Hepatitis B Surface Antibody, Hepatitis C Antibody, HIV 1/2 Antigen/Antibody, Immunoglobulin-A , MMR Antibodies MMR Titer, Sperm agglutination, Syphilis RPR, Varicella Zoster Virus Antibodies: IgG

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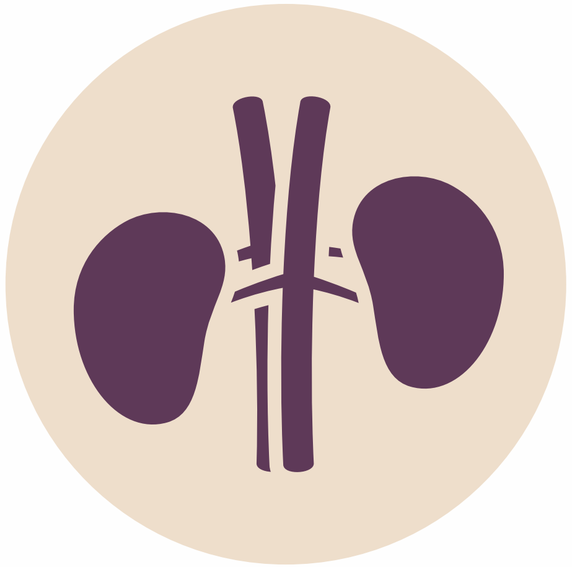

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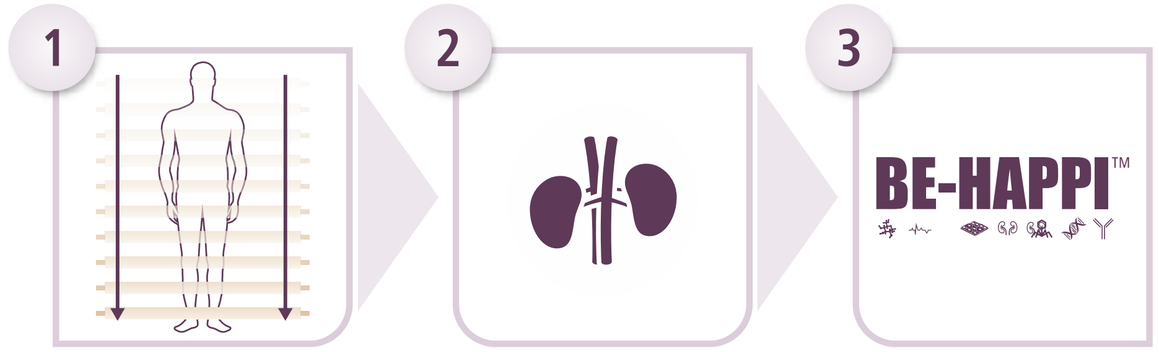

EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

IF PROBLEM IN ORGAN SYSTEM DISCOVERED

VIRINCHI'S BE-HAPPI™ FRAMEWORK IS APPLIED TO THE ORGAN SYSTEM AND TREATMENT PLANNED ACCORDINGLY

Biomarkers are biological indicators that provide us with a means of understanding the relationship between measurable biological processes and clinical outcomes for evaluating health and wellness. Further, the study of biomarkers enables us to devise treatment options for all disorders and diseases since they enhance our understanding on physiology and anatomy of an individual.

Proper functioning of every organ and system in our body is essential for us to live a healthy and good quality of life as we progress through various phases of our life. Any deviation from performing one function may result in disordered physiological processes and will be associated with either symptomatic or asymptomatic disorder. If the disorder is manifested in the form of symptoms and signs, then it can be identified accurately with the help of specific diagnostics tests. However, asymptomatic disorders that typically do not show any clinical symptoms and signs could gradually lead to secondary complications affecting one or multiple systems that may be difficult to understand and treat

Therefore it is very essential to understand the health of all the organs and systems of our body irrespective of respective/overall disorderliness with or without any symptoms in order to understand thoroughly whether any function is impaired or progressing towards impairment with the help of comprehensive diagnostic tests. Virinchi's proprietary BE-HAPPI™ evaluates the health status of every organ and organ system from a biochemical, electrophysiological, histological and cytological, anatomical, pathogenic, phenotypic and genotypic, immunological perspectives. The influences of these factors on biomarker levels also indicate disorder's onset and/or its progression either as an independent or comorbid consequence.

With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific predictive, preventive and reactive therapies and interventions.

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

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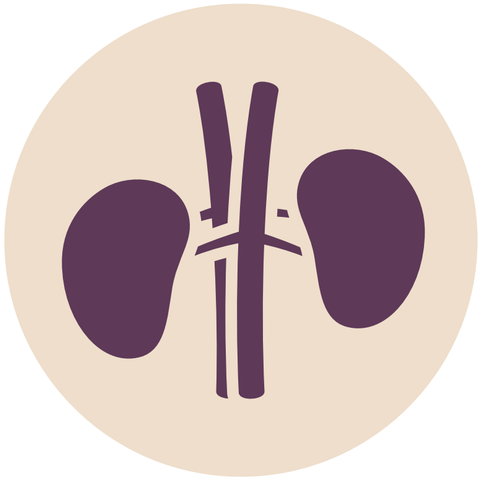

BIOCHEMICAL

Many of the biological molecules including nucleic acids, proteins, lipids, fats and naturally occurring small chemicals that are formed due to metabolic and physiological activities serve as important contributors to understand the health of every organ and system in our body; and also help us to evaluate the nature and degree of disorderliness across systems and organs with the help of analytical, cytological, histochemical and immunological methodologies.

PARAMETERS TESTED @ VIRINCHI

MMP-3, Angiotensinogen II, Apolipoprotein-B, Asymmetric dimethylarginine (ADMA), B2-microglobulin (B2-M), Blood urea nitrogen, Complement factor B (CFB), Complement factor I (CFI), Complete Blood Count (CBC), Comprehensive Metabolic Panel (CMP), Creatinine Clearance , Cysteine-rich protein-61 (CYR-61), EGFR, Erythropoietin (EPO), FH(Fumarate Hydratase), Fibroblast growth factor 23 (FGF-23), Gamma-glutamyl transpeptidase (GGT), Glomerular Filteration Rate (GFR), GST (Glutathione-s-transferase), HDL cholesterol, IGF-binding protein 7 (IGFBP7), Interleukin 18 (IL-18), Kidney injury molecule 1 (KIM-1), Kidney Stone Analysis, Kidney Stone Risk Panel, Lactate dehydrogenase (LDH), LDL, Lipoprotein-a, Liver-type fatty acid–binding protein (L-FABP), Matrix metalloproteinases (MMPs), Microalbumin, MMP-8, Mortality Urinary N-Acetyl-b-O-glucosaminidase, N-acetyl-glucosaminidase (NAG), Neutrophil gelatinase associated lipocalin(NGAL), Non-HDL, pi-glutathione s-transferase (p-GST), Plasma/serum cystatin C (CyC), Serum creatinine, tissue inhibitor of metalloproteinase-2 (TIMP-2), Total cholesterol, Tryglycerides, Urinalysis, Urinary CD14 mononuclear cells, Urinary connective tissue growth factor, Urinary liver-type fatty acid-binding protein, Urinary retinol binding protein 4, Urine Albumin Test, Urine cystatin C, Urine Total Protein Test, Beta-trace protein (BTP)

ELECTROPHYSIOLOGICAL

Electrodiagnostic biomarkers provide information on electrical activity (action potential) due to native or altered electrophysiology of cells and tissue or their response towards electrical stimuli (evoked potential). Typically, electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG) are employed to measure the electrical activity values and help to diagnose, evaluate, and treat the individual with impairments of the neurologic or neuromuscular or muscular systems.

PARAMETERS TESTED @ VIRINCHI

Anion gap; Potential value of defined renal epithelial cell cultures

HISTOPATHOLOGICAL

Cytopathology and Histopathology observations of cells and tissue allow the understanding of gross structural, physiological and molecular changes at the cell and tissue level respectively. These microscopic observations with grading and staging are vital to understand the response of cells due to external stimuli or DNA changes which either might result into a transient change or pathological consequence requiring suitable surgical or medical or radiological therapy.

PARAMETERS TESTED @ VIRINCHI

Calbindin D-28, Carcinoembryonic antigen(CEA), Clusterin, Cyr61, Exosomal fetuin-A, H-FABP, L-FABP, NHE-3

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ANATOMICAL

Imaging techniques offer sensitive and precise visualization and also digitization of anatomical features of organs and systems of the body. It helps the patient or individual to undergo a gamut of pain free investigations, non-invasively. And these biomarkers can be measured using either radiological or non-radiological modalities such as, X-ray, CT, Ultrasonography, Electroencephalography, Magnetoencephalography, and Magnetic Resonance Imaging in order to provide us with either qualitative or quantitative measure of the anatomical features and physiological processes such as blood flow.

PARAMETERS TESTED @ VIRINCHI

Arterial input function (AIF) - DCE MRI, Axial Perfusion Rate Map - ASL MRI, Cortical R2* Map - BOLD MRI, Cortico medullary sodium gradient - Na MRI, Differential renal function (DRF) - Dynamic MR Urography , Diffusion tensor imaging (DTI), Diffusion weighted imaging (DWI), Echo-planar imaging (EPI), Evaluation of tissue mechanical property – MR elastography , Functional renal MRI, Glomerular filtration – DCE, In vivo renal properties - DCE MRI, Interstitial diffusion – DWI, Intra renal Stenosis Measurement – BOLD, Intra-voxel incoherent motion (IVIM), Longitudinal relaxation time T1, Macro circulation - Doppler Ultrasound scan, Macro/microcirculation- Contrast enhanced ultrasound, Medullary R2* Map - BOLD MRI, Oxygenation & Perfusion - BOLD MRI, Perfusion - ASL, DCE, DWI(IVIM), Renal artery stenosis (RAS) - MR Renography, Renal Oxygen Extraction Fraction, Renal perfusion, Renal T2*, Renal tissue partial pressure of oxygen , Renal vascular hypertension (RVH) - Cine phase-contrast MRI (3D cine PC MRI), Resorption changes - Diffusion-weighted magnetic resonance imaging (DWI or DW-MRI), Resorption changes - Intravoxel Incoherent Motion (IVIM) Imaging, Semiautomatic Tissue Volume, T2* map of Renal Medulla - Bold MRI, Tissue oxygenation - BOLD, Total Kidney Volume , Unilateral ureteral obstruction (UUO)

PHENOTYPIC & GENETIC

Changes brought about to the DNA, RNA and their respective derivatives due to germline or somatic mutations influence an individual's overall existence and susceptibility or resistance towards a wide variety of disease causing infectious agents. Understanding the underlying molecular details with the help of advanced/next generation sequencing technologies provides insights into either devising a therapeutic or corrective intervention.

PARAMETERS TESTED @ VIRINCHI

ABCC6, ANKRD11, AR(androgen receptor)gene, BANP, BAP1, BRD2, CFTR gene, COL4A3, COL4A4, Complement factor H (CFH) gene, CRISPLD2, CUX1, ELMO1, EXOC3, FKBP5, FLCN, GALNT2, hCDC4, IFLTD, INHBA-AS1, JAK2, MCM2, MCP genes, MET, MITF, NPHS2, PKD1 l, PKD2, PRKAG2, SDHA, SDHB, SDHC, SDHD, SLC6A16, STK24, SYNPO2, Thrombomodulin (THBD) genes, TP53BP2, TSC1, TSC2, ZFP36L1

PATHOGEN SCREENING

Pathogen screening helps to find out either presence or absence of all the relevant pathogenic microorganisms including - bacteria, fungi, viruses, mycoplasma and protozoans. This identification process allows the healthcare provider with specific information on every possible mode that can be implemented towards prevention, treatment and eradication. It also allows the physician to decide pathogen specific medication in suitable dosage and form for effective and safe elimination without causing any adverse effects to the affected patient.

PARAMETERS TESTED @ VIRINCHI

Candida species, Chlamydia trachomatis, Enterococcus faecalis (group D streptococci), Herpes simplex virus, HIV, Klebsiella, Proteus mirabilis, Pseudomonas aeruginosa, Salmonella species, Staphylococcus saprophyticus, Streptococcus agalactiae (group B streptococci), Ureaplasma urealyticum

IMMUNOLOGICAL

The immunologic Biomarkers provide insights into the body's response towards cancer, infectious diseases, immunization, immunodeficiency, allergies, asthma, autoimmunity, and other immune disorders. These features can be studied from variety of biological specimens by using highly advanced and high throughput immune assay systems. And these biomarkers also help to understand the extent of disease progression and probability of positive prognosis for a wide range of diseases.

PARAMETERS TESTED @ VIRINCHI

HLA class II Antibodies, IgG antibodies, Panel Reactive Antibody Test (PRA), Streptococcal Antibody Test

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

RIGHT TO SCIENCE CLUB
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