EMERGENCY MANAGEMENT SYSTEM

Accessibility for the public to the Emergency Management System, to adequate radio space for providers to communicate with each other in spite of disaster, communications is the epitome of EMS.

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

RIGHT TO SCIENCE CLUB

virinchi HOSPITALS Cell Correct

Gastroenterology, Hepatology & General Surgery

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals

Cuisine of any geography is ADMEd down democratically

DEPARTMENT OF GASTROENTEROLOGY & HEPATOLOGY

virinchi HOSPITALS
Cell Correct

FOREWORD

The Department of Gastroenterology & Hepatology offers treatment and management of wide spectrum of gastric and liver diseases with varying degrees of severity. Our specialists are skilled in various procedures, including advanced diagnostic, therapeutic and open to minimally invasive surgical interventions. All procedures and investigations are performed using state-of-the-art equipment and facilities. The department is considered to be the preferred referral centre for the patients from all over the country.

The Department of Gastroenterology & Hepatology provides diagnosis and treatment against all forms of disorders and conditions of the gastrointestinal tract, liver and pancreas in particular for different medical conditions.

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Dr. Krishna Mohan MC

MBBS, MD (Gen. Med), DM (Gastroenterology)

Sr. Consultant - Gastroenterology, Hepatology and Therapeutic Endoscopy

Dr. Krishna Mohan is a Consultant Gastroenterologist in the Department of Gastroenterology at Virinchi Hospitals. He has overall 20 years' experience in his field. Prior to joining Virinchi Hospitals, he worked in Kuwait for 13 years as Consultant Gastroenterologist in the Ministry of Health and at Indo-American Cancer Hospital, Hyderabad and Care Hospitals Hyderabad, respectively. He has also worked as Associate Professor in the Department of Gastroenterology at St. John's Medical College, Bangalore. He has hands-on experience in diagnostic UGI Endoscopy, Colonoscopy and therapeutic ERCP procedures including ES, NBD, NPD, Biliary stenting and biliary stone extractions. In addition, he also specializes in these therapeutic procedures: Esophageal Stricture Treatment (EST), Endoscopic Variceal Ligation (EVL), Foreign Body Removal, Polypectomy, Dilatations, Endoprosthesis placement, and Percutaneous Endoscopic Gastrostomy (PEG), Percutaneous Endoscopic Jejunostomy (PEJG). He also has expertise in Endoscopic Ultrasound (EUS).

MEET OUR EXPERTS

Dr. C. Gabriel Sukumar

M.S., D.N.B., M.R.C.S. (Eng)

Consultant Surgeon & Surgical Gastroenterologist

Dr. C. Gabriel Sukumar is Sr. Consultant in department of Laparoscopic Surgery at Virinchi Hospitals. Overall, he has 19 years of experience as consultant surgeon. He undertook higher surgical training in Australia after completing post-graduation.

Dr. Sukumar has vast experience in General Surgery, Surgical Gastroenterology, Vascular Surgery, Surgical Oncology, Laparoscopic Surgery, Endoscopy & Colonoscopy, gained over his entire professional career.

He did his under graduation and M.S. from Christian Medical College, Vellore in 1992 and 1996 respectively. He passed Diplomat of National Board (D.N.B.) in Surgery in 1997 and MRCS from London in 2008.

Dr. Sukumar has written papers and publications that were published in National and International books.

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

TREATMENTS AND THERAPIES OFFERED

virinchi HOSPITALS Cell Correct

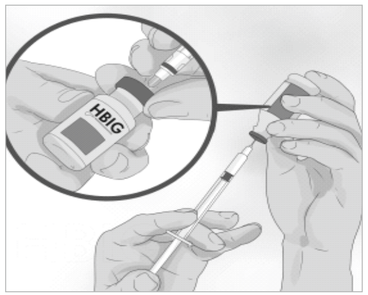
MRI IN GASTROENTEROLOGY

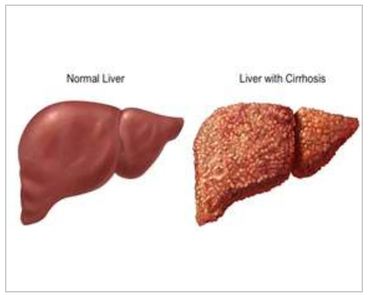
UNIQUE FEATURES

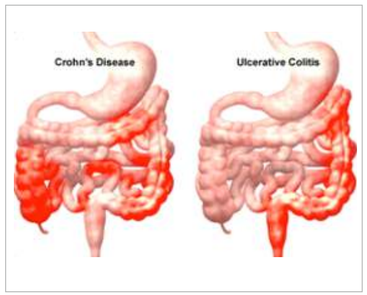
- Increased bore space to reduce anxiety in claustrophobic patients
- Smart programming to decrease retakes, increasing consistency and exam speed
- Digital coil design significantly reduces coil weights and prompts less patient repositioning in numerous exams
- The ambient light ring on the magnet façade and adjustable, in-bore lighting enhance the openness of the system
- Patient-perceived gradient acoustic noise is reduced by more than 80%

MRI IN GASTROENTEROLOGY

- Helps in detecting and characterizing lesions of the liver, pancreas, bile ducts and gastrointestinal tract; also helpful in diagnosing other disorders associated with these organs including inflammatory bowel disease and small bowel tumors.
- MR-colonography detects polyps in patients at increased risk of colorectal cancer
- Magnetic resonance cholangiopancreatography (MRCP) – to detect obstructions in common ducts connecting liver, pancreas, gall bladder and gastrointestinal tract





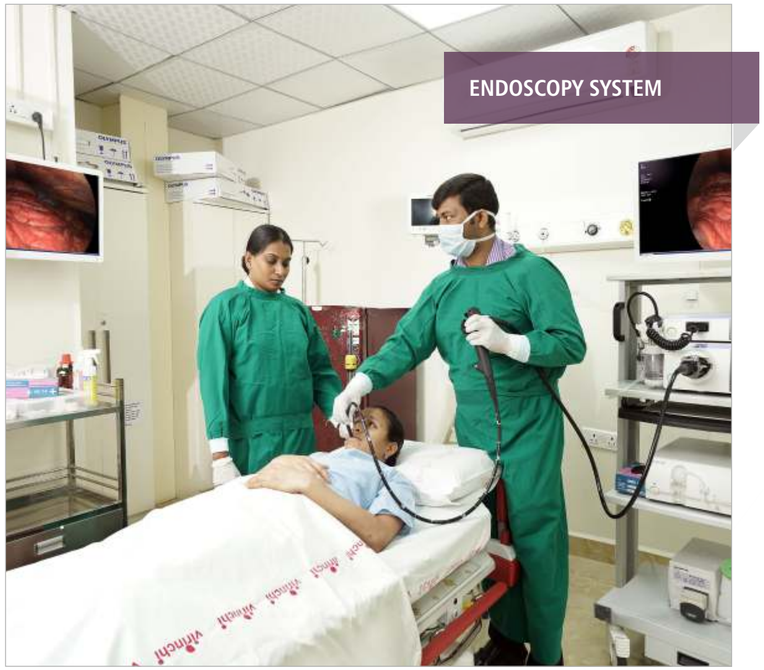


- Acute and Chronic Viral Hepatitis
- Liver Cirrhosis
- Portal Hypertension
- Hepatobiliary cancer
- Ulcerative Colitis
- Crohn's Disease

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

TREATMENTS AND THERAPIES OFFERED

virinchi HOSPITALS Cell Correct



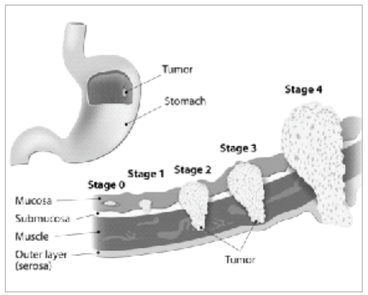
ENDOSCOPY SYSTEM

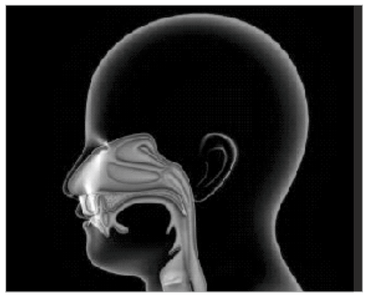
UNIQUE FEATURES

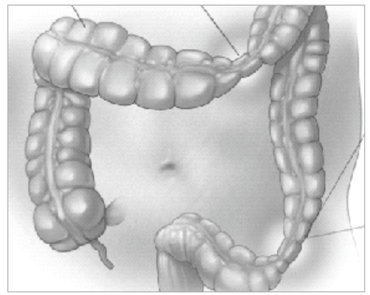
- Dual Focus enables detailed examination of mucosal changes at the touch of a button
- Narrow band imaging delivers increased brightness & contrast
- Provides images of excellent clarity
- Integrated water jet channel helps in keeping a clearer view during hemostasis or complex therapeutic procedures
- Provides exceptional efficiency in lesion detection and characterization

DIAGNOSTIC APPLICATIONS

- Esophagogastroduodenoscopy
- Enteroscopy
- Rectoscopy
- Anoscopy
- Colonoscopy
- Sigmoidoscopy
- Cholangiopancreatography (ERCP)







- Early Gastrointestinal Cancer
- Functional Bowel Disease
- Barrett's esophagus
- Early gastric cancer and colonic polyps

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

TREATMENTS AND THERAPIES OFFERED

virinchi HOSPITALS Cell Correct

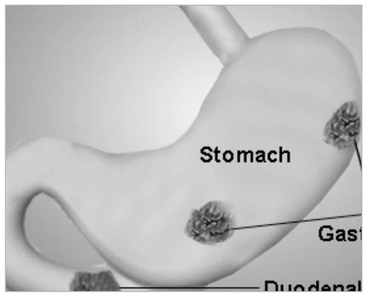
ULTRASOUND SYSTEM

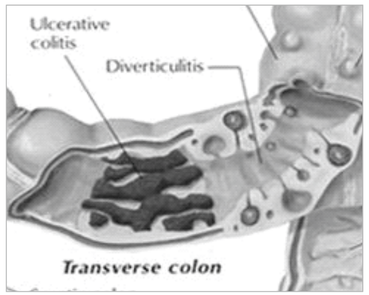
UNIQUE FEATURES

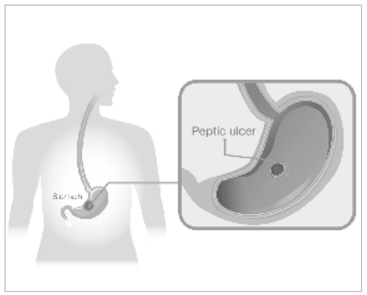
- Anatomical Intelligence Ultrasound (AIUS)
- Technology has improved penetration & excellent detailed resolution in difficult-to-image patients
- Fully integrated fusion capabilities allow clinicians to achieve fast & effective fusion of CT/MRI/PET with live ultrasound.
- Excellent ergonomics help reduce repetitive stress injuries
- Minimally invasive procedure that uses non ionizing radiation

DIAGNOSTIC APPLICATIONS

- Elastography
- Detection of Gallstones
- Identification of fluid, cysts, tumors, abscess in the abdomen or liver
- Bowel imaging
- Abdominal vascular Injuries
- View Small parts and superficial Structures
- Strain elastography
- Shear wave elastography (ElastPQ)
- Perioperative ultrasound







- Irritable bowel syndrome
- Malabsorption syndrome
- Gastrointestinal bleed
- Chronic diarrhea
- Severe Constipation
- Peptic ulcer
- Reflux disease

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

TREATMENTS AND THERAPIES OFFERED

virinchi HOSPITALS Cell Correct

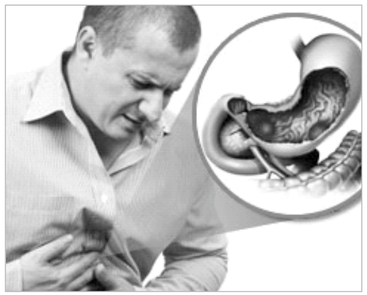
DIGITAL RADIOGRAPHY

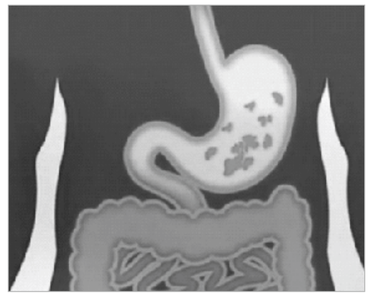
UNIQUE FEATURES

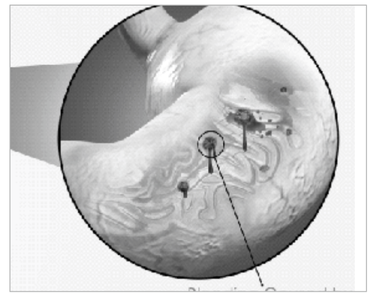
- Time efficiency through bypassing chemical processing and the ability to digitally transfer and enhance images
- Digital flat panel detector (FDP) & imaging software with excellent digital image processing unit which offers remote diagnostic solutions
- Greater productivity and more options to enhance images
- Diagnose with confidence while lowering radiation dose

DIAGNOSTIC APPLICATIONS

- Abdominal X-ray
- Upper GI tract X-ay
- Lower GI examination





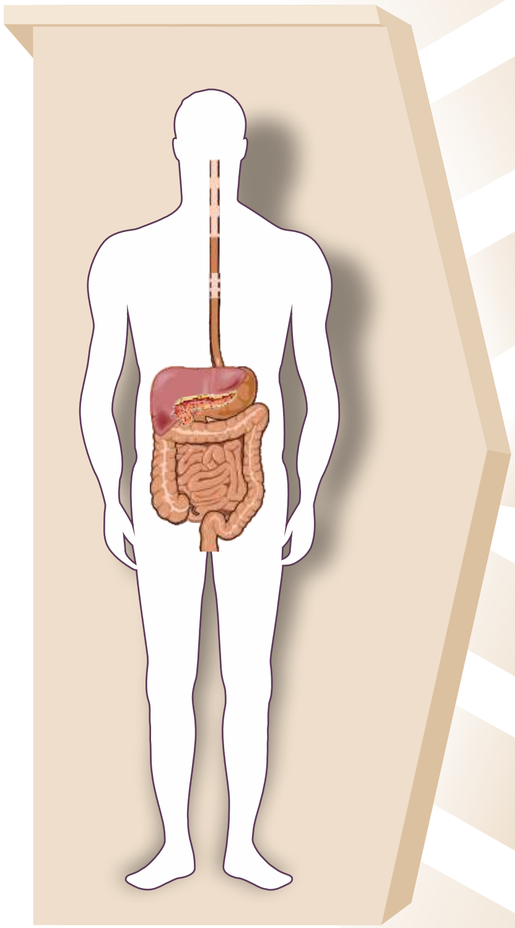


- Acute liver failure
- Chronic liver disease (alcoholic)
- Bilio-pancreatic disorders
- Pancreatic Diseases

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

GASTROENTEROLOGY & HEPATOLOGY: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct



BIOCHEMICAL

ELECTROPHYSIOLOGICAL

HISTOPATHOLOGICAL

ANATOMICAL

PATHOGEN SCREENING

PHENOTYPIC & GENETIC

IMMUNOLOGICAL

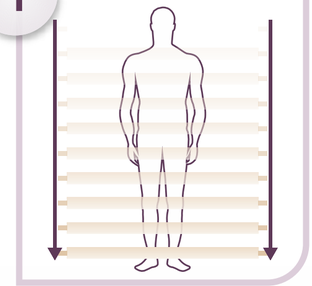
VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

GASTROENTEROLOGY & HEPATOLOGY: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct

1



EVERY MEMBER UNDERGOES A MASTER HEALTH CHECK UPON JOINING

2

IF PROBLEM IN ORGAN DISCOVERED

3

BE-HAPPI™

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.

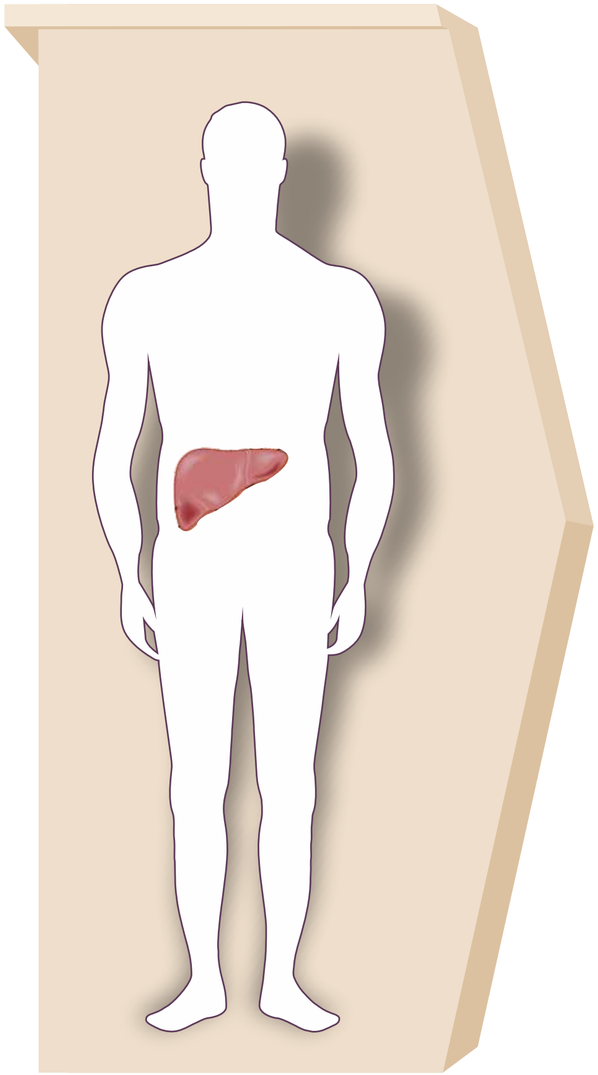
With advanced and sophisticated technology housed in world-class infrastructure, and strong rooting in evidence-based medicine, Virinchi is well-positioned to undertake this comprehensive analysis to derive accurate and predictable diagnosis, thus enabling its physicians to devise individual-specific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

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

LIVER: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct



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)

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

LIVER: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct

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

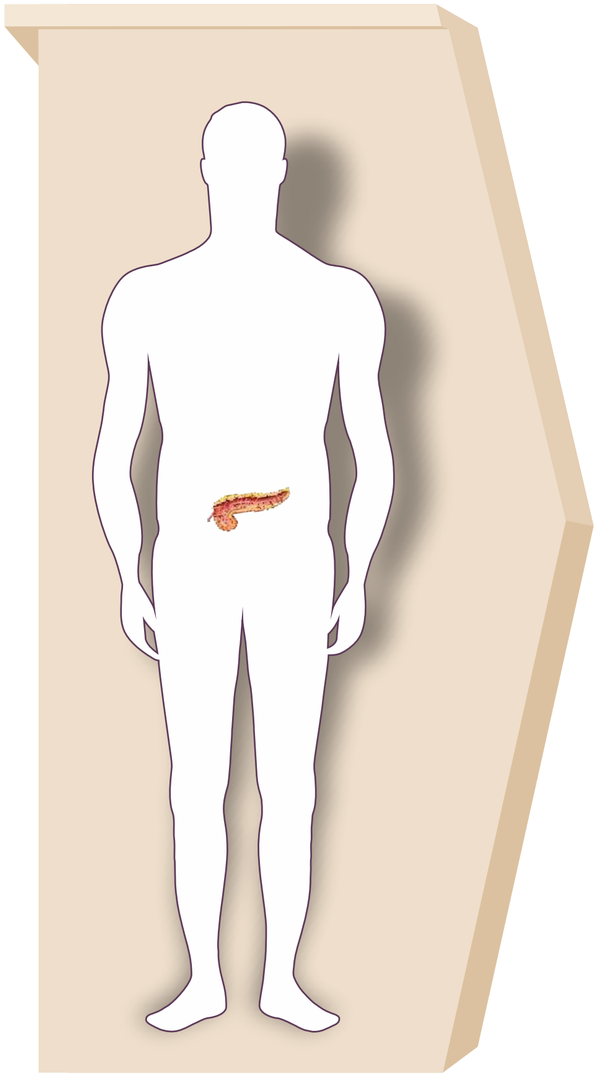
ABO, Anti liver FABP antibody, Antibodies to Saccharomyces cerevisiae(ASCA), Anti-liver-kidney microsomal (LKM) antibodies, Antinuclear antibody, Anti-smooth muscle antibody , H chain H Igg B12, Hepatitis A antibodies, Hepatitis A Test (HAV-Ab IgM HAV-Ab IgG Anti-HAV), Hepatitis B antibodies, Hepatitis 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

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

PANCREAS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct



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

PANCREAS: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct

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

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

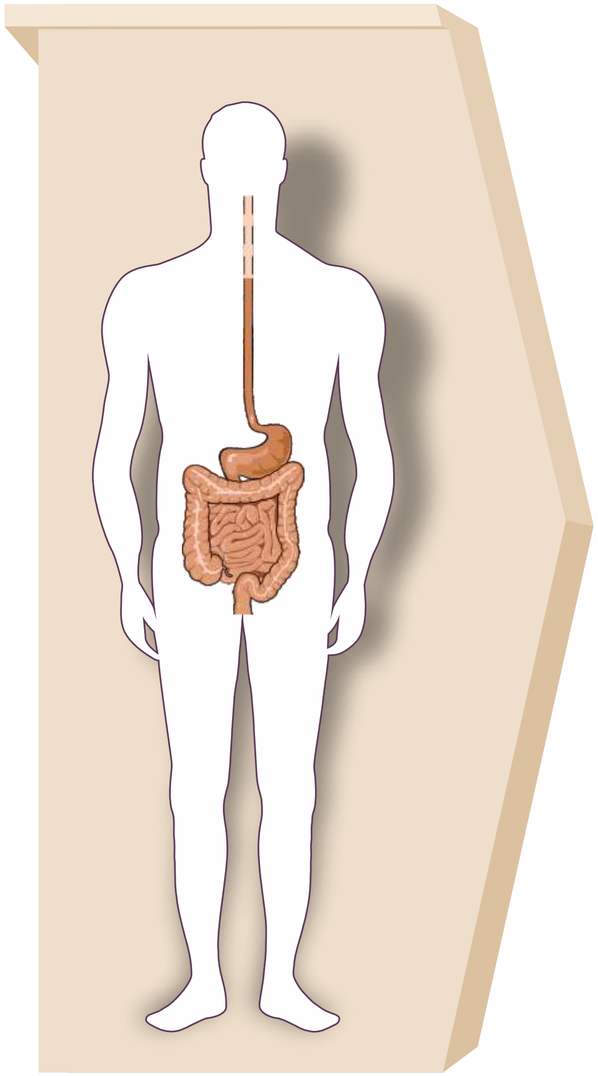
Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

STOMACH: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct



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

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

RIGHT TO SCIENCE CLUB

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.

040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

STOMACH: BIOMARKER BIG DATA FOR PERSONALIZED MEDICINE

virinchi HOSPITALS Cell Correct

VIRINCHI'S PROPRIETARY BE-HAPPI™ DIAGNOSTICS FRAMEWORK

RIGHT TO SCIENCE CLUB

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.

040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

COLONOSCOPY WITH 360° VISUALIZATION

- A disposable soft tube colonoscope with pneumatic self-propulsion mechanism, 360° visualization and intuitive joystick control
- Designed to ensure visualization behind folds, to exert 10 times less pressure on the colon wall, and to eliminate the risk of disease transmission

WIRELESS INGESTIBLE CAPSULE TECHNOLOGY(WICT) FOR ENDOSCOPY

- It is an ingestible capsule that measures pressure, pH and temperature as it travels through the gastrointestinal (GI) tract to assess GI motility disorders like gastroparesis
- It also minimizes patient down-time by allowing patients to resume most normal daily activities while data is being collected by the capsule
- Eliminates radiation exposure and is the only motility test that provides a complete transit profile of the GI tract

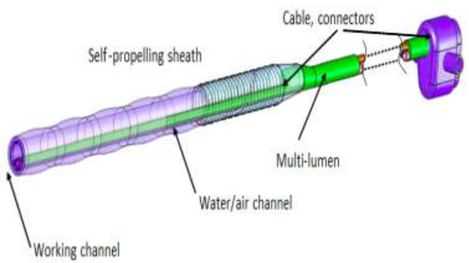
RIGHT TO SCIENCE @ GASTROENTEROLOGY AND HEPATOLOGY
virinchi HOSPITALS Cell Correct

COMPUTER-ASSISTED PERSONALIZED SEDATION STATION

- The device is equipped with several safety mechanisms. It does not allow propofol infusion unless oxygen is being delivered to the patient
- The device assesses patient responses to the verbal and tactile stimuli and incorporates restrictions based on these responses

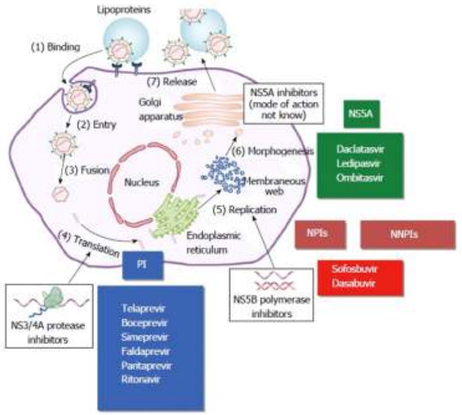
SELF-PROPELLED SEMI-DISPOSABLE COLONOSCOPE

- Provide the means to accommodate state-of-the-art technologies, including a high-performance camera, on-board steering unit, digital processing and therapeutic capabilities via a standard working channel
- Offers all the features of standard therapeutic colonoscope, with the advantage of a self-propelled mode and disposable elements that directly contact the body



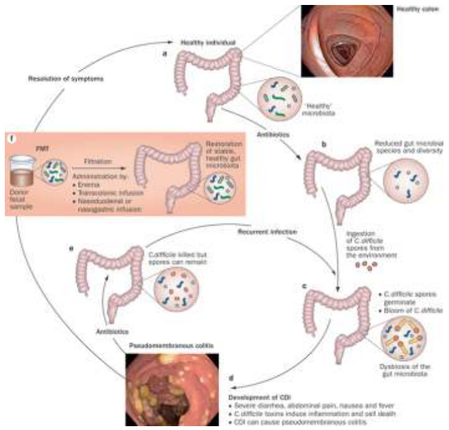
Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

NEW ERA IN HEPATITIS C TREATMENT



- New generation Hepatitis C treatment options hold promise for better viral clearance with less toxicity
- NS5B polymerase inhibitor sofosbuvir and the protease inhibitor simeprevir for use in combination with pegylated interferon alfa and ribavirin in selected patients infected with hepatitis C

FECAL MICROBIOTA TRANSPLANTATION



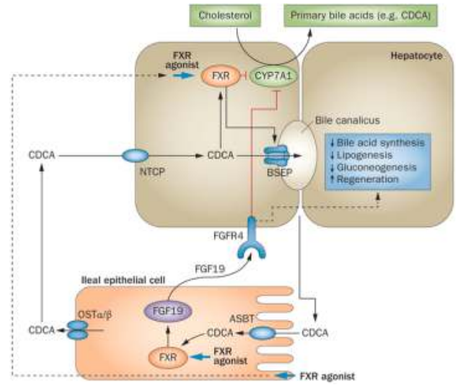
- Aids in infusion of fecal suspension
- The procedure is done using fresh stool transplants,frozen stool transplants (capsules are a subtype), or biosynthetic combinations of organisms derived from normal fecal microbiota
- Has nearly 90% cure rate for patients with recurrent Clostridium diffcile infection (CDI)
- Significant role in Gastroenterlogy
- Most effective treatment available for this indication, far surpassing that of antibiotics

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

RIGHT TO SCIENCE @ GASTROENTEROLOGY AND HEPATOLOGY
virinchi HOSPITALS Cell Correct

OBETICHOLIC ACID

- Obeticholic acid is an analog of the naturally occurring bile acid chenodeoxycholic acid (CDCA), to which a single α-ethyl group is added to the 6-carbon position
- CDCA is the natural ligand of the farnesoid X receptor (FXR), a nuclear receptor expressed at high levels in the liver and intestine, which regulates bile acid homeostasis. Obeticholic acid (OCA) is approximately 100 fold more potent than CDCA

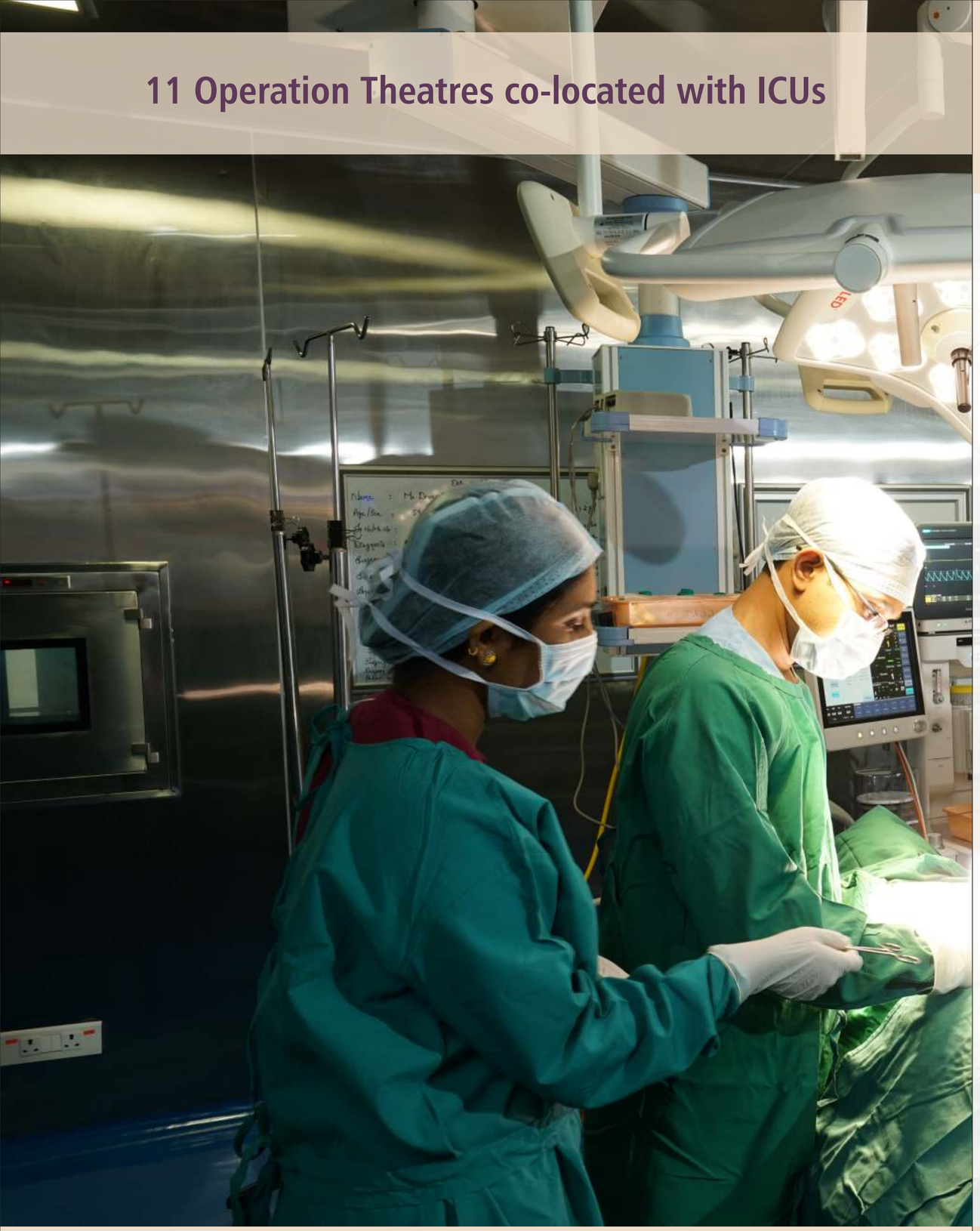


BLOOD TEST FOR COLORECTAL CANCER SCREENING

- A second-generation serum assay for the detection of circulating methylated Septin 9 for colorectal cancer screening
- Is a qualitative in vitro diagnostic test for the detection of methylated Septin9 DNA in EDTA plasma derived from patient whole blood specimens
- Methylation of the target DNA sequence in the promoter region of the SEPT9_v2 transcript has been associated with the occurrence of colorectal cancer (CRC)
- The test uses a real-time polymerase chain reaction (PCR) with a fluorescent hydrolysis probe for the methylation specific detection of the Septin 9 DNA target

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

11 Operation Theatres co-located with ICUs



DEPARTMENT OF GENERAL SURGERY

virinchi HOSPITALS
Cell Correct

FOREWORD

The Department for General Surgery at Virinchi Hospitals is dedicated to provide wide-ranging, state-of-the-art surgical care and service excellence to our "In Patients" as well to those who are looking for ambulatory services. The department provides modern, comprehensive surgical care for both routine and critically ill patients. Also, it offers a comprehensive treatment plan to achieve long term weight-loss and help you increase your quality of health with lesser medications and best lifestyle management programs.

The intra and interdepartmental collaboration and new developments in the diagnosis and treatment benefit the patients undergoing surgery at Virinchi Hospitals; as our objective is to improve surgical outcome is the multidisciplinary approach that brings together various specialities and expertise including cardiology, medical oncology, surgical oncology, palliative oncology, radiation oncology, hepatology, infectious disease, pathology, and radiology.

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Dr. Tagore Mohan Grandhi

M.B.B.S., M.S., FRCS,Fellowship in Laparoscopic & Bariatric Surgery (U.S.A)

Sr. Consultant – GI, Laparoscopic & Bariatric Surgery

Dr. Tagore Mohan Grandhi is a Senior Consultant in the Department of Minimally Invasive, Metabolic and Bariatric Surgery at Virinchi Hospitals. He has 18 years' experience in Laparoscopic and Gastrointestinal Surgery. He worked nearly for a decade in reputed hospitals in UK and obtained training in gastrointestinal and laparoscopic surgery. Dr. Tagore is one of the few surgeons in India who had formal fellowship training in advanced laparoscopic and bariatric surgery in USA. During his training in USA, he has had experience of performing more than 400 bariatric surgeries and equal number of laparoscopic surgeries. He has performed thousands of laparoscopic surgeries including good number of advanced laparoscopic procedures related to stomach, intestines, colon, spleen and different types of hernias. He has publications in various international journals and has authored chapters in reputed text books.

MEET OUR EXPERTS

Dr. C. Gabriel Sukumar

M.S., D.N.B., M.R.C.S. (Eng)

Consultant Surgeon & Surgical Gastroenterologist

Dr. C. Gabriel Sukumar is Sr. Consultant in department of Laparoscopic Surgery at Virinchi Hospitals. Overall, he has 19 years of experience as consultant surgeon. He undertook higher surgical training in Australia after completing post-graduation.

Dr. Sukumar has vast experience in General Surgery, Surgical Gastroenterology, Vascular Surgery, Surgical Oncology, Laparoscopic Surgery, Endoscopy & Colonoscopy, gained over his entire professional career.

He did his under graduation and M.S. from Christian Medical College, Vellore in 1992 and 1996 respectively. He passed Diplomat of National Board (D.N.B.) in Surgery in 1997 and MRCS from London in 2008.

Dr. Sukumar has written papers and publications that were published in National and International books.

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Bacteriostatic Epoxy flooring to minimize the spread of microbes

TREATMENTS AND THERAPIES OFFERED

virinchi HOSPITALS Cell Correct

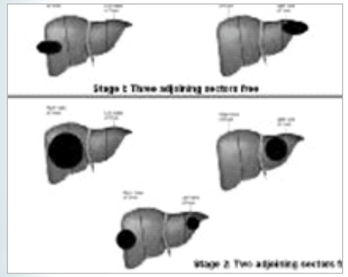
EES GENERATOR & 3D SPIES CAMERA SYSTEM

UNIQUE FEATURES

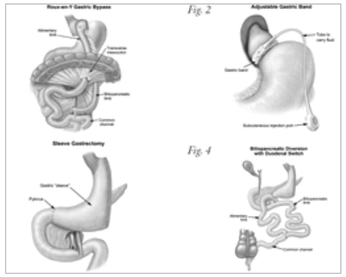
- High-resolution display with wide viewing angles
- Compact design takes up less space in the OR
- Software updates available via USB memory stick
- On-screen diagnostics
- Constant light intensity throughout the operating life
- Low heat development and offers quiet operation
- High efficiency and OT friendly
- Consists of 3D video endoscopes with a 0 or 30 degree direction

CLINICAL APPLICATIONS

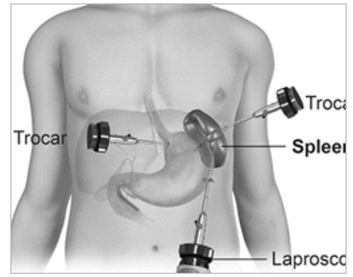
- Hernia Surgery
- Upper Gastro Intestinal Surgery and Lower Gastro Intestinal Surgery
- Breast Skin and Soft Tissue Surgery
- Head & Neck Surgery
- Endocrine Surgery
- Peripheral Vascular Surgery
- Plastic Surgery
- Pediatric Surgery
- Vascular Surgery



- Appendectomy
- Breast Augmentation
- Breast Biopsy
- Breast Cancer Detection and Treatment
- Breast Cancer Surgery Including
- Breast Cancer: Lumpectomy and Partial Mastectomy
- CAPP Catheter Placement
- Cardiac Surgery
- Cardiothoracic Surgery
- Chemotherapy for Breast Cancer
- Cholecystectomy
- Colorectal Surgery
- Esophagogastric Fundoplasty



- Exploratory Surgery
- Exploratory Laparotomy
- Surgery for Gall stones
- Gastric Bypass
- Gastrointestinal malignancies
- Gastrointestinal Surgery
- Splenectomy
- Surgical Oncology
- Thoracic Surgery
- Transplantation
- Trauma, Emergency Surgery and Surgical Critical Care (TESSCC)
- Acute Care Surgery
- Vascular and Endovascular Surgery
- Hepatic, Pancreatic, Biliary Surgery



- Hernia & Abdominal Wall Reconstruction Surgery
- Hormone Replacement Therapy and Breast Cancer
- Open Hernia Repair
- Laparoscopic Surgery
- Liver resection
- Minimally Invasive Breast Biopsy
- Morbid Obesity Surgery
- Paediatric Surgeries
- Plastic and Reconstructive Surgery
- Preventive Breast Cancer Surgery
- Radio Frequency Ablation (RFA) for liver tumours
- Retroperitoneal lymph node excision

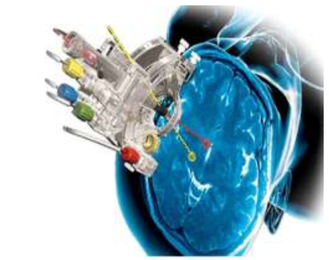
Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

SURGICAL NAVIGATION SYSTEM

- It is a next generation product that combines images from a variety of traditional sources. Such as X-ray, computerized tomography(CT), magnetic resonance imaging(MRI), and ultrasound
- Analyses pre-operative diagnostic scans to create three-dimensional images used by the surgeon to map out the safest and least invasive surgical path
- Real time images are continually produced throughout the surgery. By merging images from multiple sources, allows surgeons to view their targets from any angle
- Images of instruments are incorporated into images of the patient's anatomy allowing the surgeon to see the exact location of the instrument in three-dimensions and in real time.

SURGICAL PLATFORM PROVIDING REAL-TIME MRI GUIDANCE



It intends to provide stereotactic guidance for the placement and operation of instruments or devices during planning and operation of neurological procedures within the MRI environment and in conjunction with MR imaging

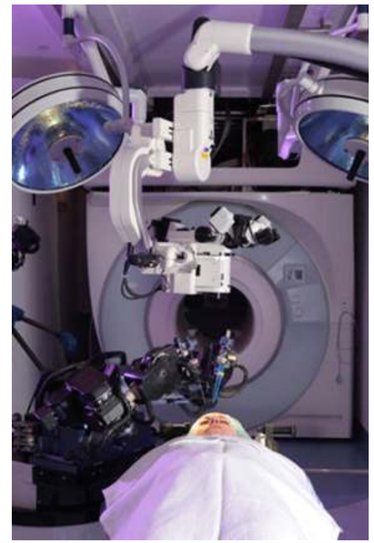
It an integral part of procedures that have traditionally used stereotactic methodology

Can be performed in a hospital's existing diagnostic MRI suite and can be used with both 1.5T and 3T scanners

RIGHT TO SCIENCE @ GENERAL SURGERY

BRAIN BIOPSY ROBOT

- The robotic system allows for a biopsy to be performed while the patient is inside an MRI scanner, with the goal being improved targeting and faster procedure times
- Being able to visualize the target while working toward reaching it can significantly improve tissue sampling, hopefully also reducing repeat biopsies

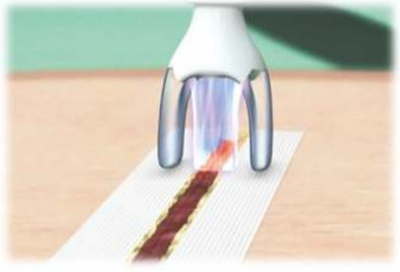


SURGICAL ABLATION PROBE

- Surgical Ablation Probe provides the capability of creating deep, extensive lesions to treat cardiac arrhythmias through a single, right-sided thoracotomy
- Uses Argon gas cryoablation to provide additional safety around vulnerable tissue structures compared to ordinary dry radiofrequency
- Probe tip achieves temperatures of approximately -150° C in test freezes
- Probe tip can be reshaped by hand to achieve good tissue apposition in varying surgical situations and approaches
- A single probe can be used for all procedures
- Can create deep, reproducible lesions

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

COLD PLASMA ADHESIVE SYSTEM



- First system in the rapidly emerging field of plasma medicine (designed for use in operating room settings as an alternative to surgical staples, sutures, and sealants)
- Combines a plasma-generating device, including a disposable plasma-emitting head and a medical plaster, which covers the wound and assists in approximating the incision edges

SURGICAL ROBOT

- Provides surgeons with increased precision, a unique compact layout, high-dexterity instrument manipulation and haptic feedback
- Enable surgeons to perform better surgery, decreasing complications afterwards, while the system design allows for a relatively low-cost solution
- Research currently focuses on implementation of haptic feedback in multiple degrees of freedom (DoF), optimization of the mechanical design of the slave robot and a dedicated eight-DoF haptic master console design

Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/

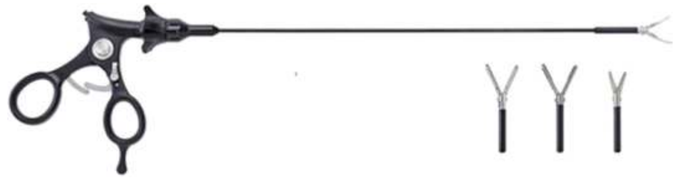
RIGHT TO SCIENCE @ GENERAL SURGERY

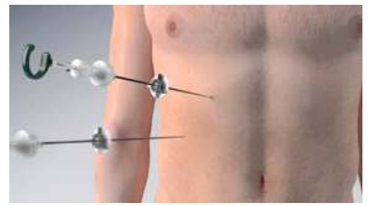
FERROMAGNETIC SURGICAL SYSTEM

- Is an intelligent surgical platform that uses ferromagnetic technology to precisely cut, coagulate, and seal tissue
- Can be used in numerous surgical sub-specialties including cardiothoracic, head & neck, neuro, surgical oncology, and more
- Sealing Shears provide surgeons with quick dissection, precise control of thermal effect, and reliable sealing of lymphatics and vessels up to 7mm in diameter in both open and laparoscopic procedures
- Includes a thermal dissection instrument that precisely cuts and coagulates with less tissue injury compared to traditional technologies, without passing electrical current through the patient

PERCUTANEOUS SURGICAL SYSTEM

- Intended to manipulate tissue and includes components that introduce a variety of instrument configurations into the abdominal cavity and requires a smaller incision site than traditional laparoscopic surgery
- Offers a reusable handle that is compatible with interchangeable instrument tips, which include graspers, scissors and dissector without the need for trocars





Virinchi Hospitals, Virinchi Circle, Road #1, Banjara Hills, Hyderabad-500 034, India.
040 4699 9999, 4699 9900 www.virinchihospitals.com contact_us@virinchihospitals.com www.facebook.com/VirinchiHospitals/