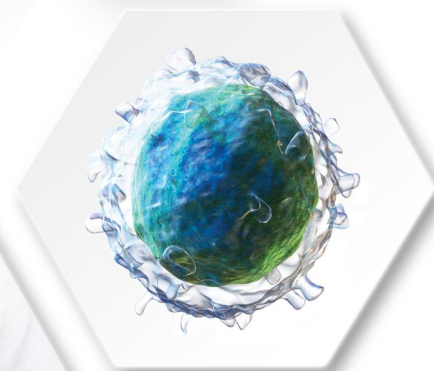


Liver Disorder





Advancells Group believes in the almost limitless potential of Stem Cells in managing life threatening diseases. Advancells provides customized protocols for 360° management of diseases and conditions with a regenerative medicine solution. We believe in promoting stem cell awareness to ensure that patients and caregivers, worldwide, know their role in the regeneration of damaged body tissues for neurodegenerative, musculoskeletal, organ damage, and aging disorders.

With the **CMO Asia Healthcare Excellence Award** and the **Healthcare and Lifescience Award** (Corporate LiveWire) adorning our achievements, we provide the best medical consultation with value to treatment aesthetics and patient consent. Besides patient-friendly therapeutics, we also aid efficient biomedical research with our customized stem cells and primary cells, as it precedes every clinical translation that can help our future generation.

REGENERATIVE THERAPY FOR ORGAN-SPECIFIC DISORDERS

- **LIVER DISORDER**
- LUNG DISORDER
- EYE DISORDER
- DIABETES
- KIDNEY DISORDER

WE ARE HERE TO HELP



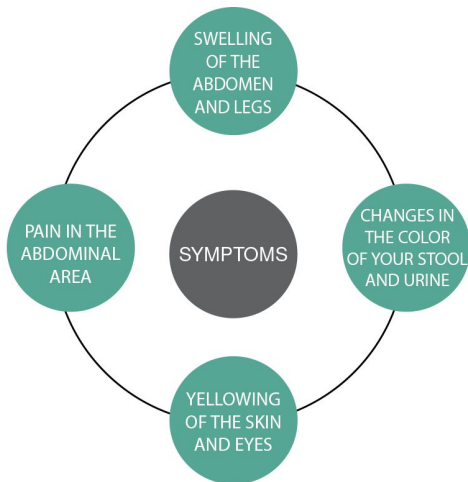
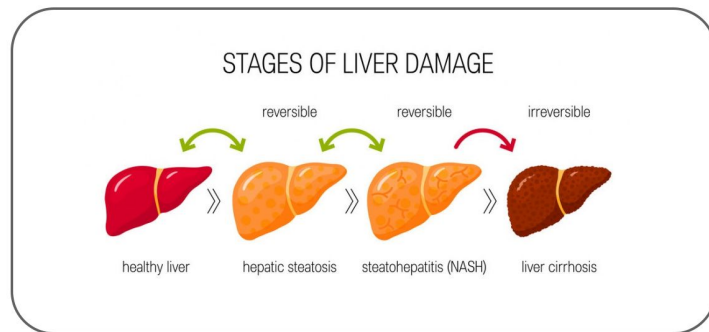
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What is Liver Disorder?

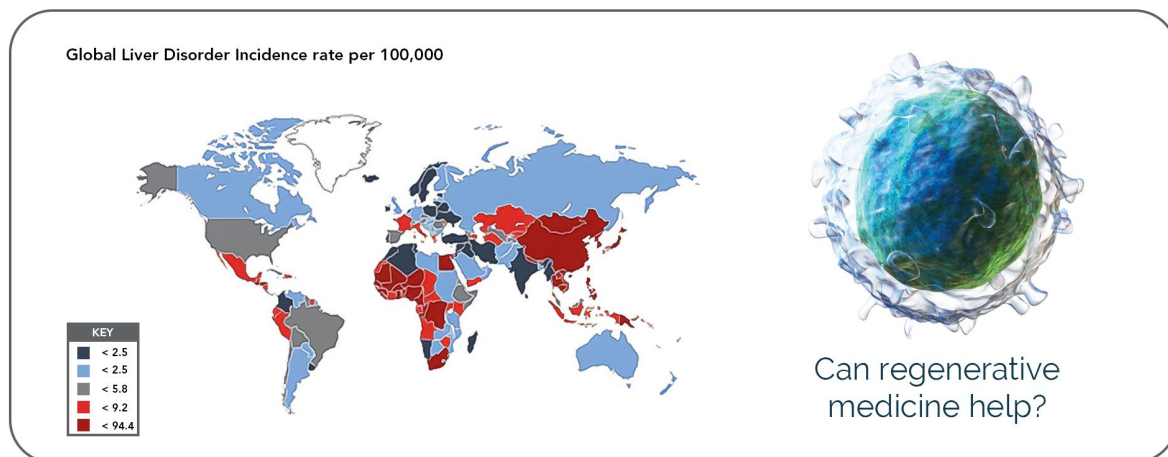
■ Damage of the Liver- Cirrhosis, Hepatitis B, or Hepatitis C

The Liver is the largest organ inside our body, located in the right side of the stomach. Since the liver is involved in a variety of critical functions, any trauma or disturbances in the normal functioning of the liver can give rise to severe liver Disorders, such as Liver Cirrhosis, Hep C, and Hep B.



Liver cirrhosis is a slowly progressive Disorder in which the healthy liver tissue is affected by some environmental factors such as alcoholism, viral infections, over intake of some medication and is replaced with the scar tissue, leading to hindered functioning of liver. Hepatitis B is a viral infection generally caused due to the direct contact with the infected person or indirect contact with body fluids such as infected blood, semen or other body fluids. It is also evident that a baby born from the infected mother also can be hepatitis B positive as the virus can transfer placenta. Chronic Hepatitis B Virus can lead to scarring of the liver, which in later stages may even cause complete liver failure or liver cancer. Hepatitis C is a viral infection generally spread through the contact of infectious blood. Since the infection of hepatitis is for a lifetime, it can lead to scarring of the liver or liver cancer in later stages of the Disorder.

Although there is no specific medication for liver damage conditions, the treatment regime is multimodal and often involves transplants, rehabilitation therapy and prescribed drugs without any hope of damage reversal. With recent scientific advances and research in stem cell therapeutics, liver disorders may have a new damage reversal hope in the form of Regenerative Medicine.



STEM CELL *Treatment for* **Liver Disorder**

- Reduced abdominal pain.
- Reduced Fatigue and weakness.
- Regulated bilirubin and SGPT levels.



Regenerative Medicine

Stem cells have the unique potential to undergo self- renewal as well as differentiate into cells of neuronal origin in the body upon natural stimulation.

What can you expect?

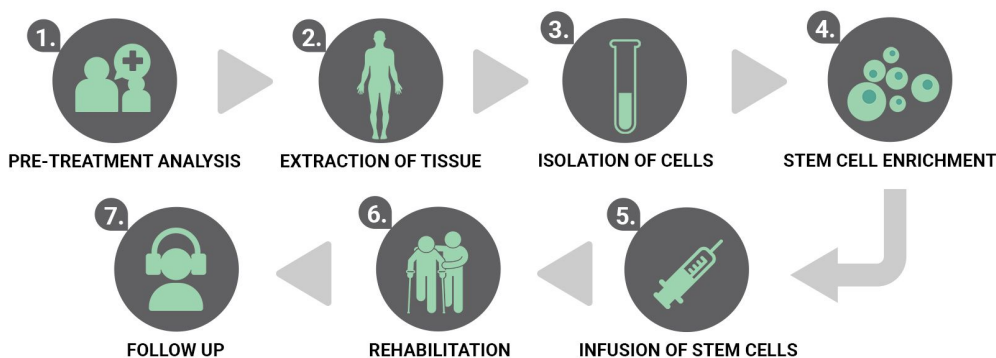
Majority of the patients treated by us have shown slower disease progression with reduced pain and tiredness. Patients generally approach stem cell treatment when they have tried all conventional therapies for liver diseases but as per clinical statistics, early stem cell therapy intervention with dietary rehabilitation is the key to better improvements in liver disorder treatment scenario.

Although type and extent of improvement is patient specific, some of the common benefits that you can expect after stem cells treatment for liver disorder are:

- Reduced fatigue and weakness.
- Improved dietary habits and lifestyle.
- Reduced abdominal pain and uneasiness.
- Improved immunological and inflammatory functions based on pre-treatment and post-treatment marker analysis.

Cell Therapy Management

Establishment of day care procedure.



PRE-TREATMENT procedure

Complete assistance will be given to the patient in all pre treatment procedures such as consultation, hospitalization (If required), Assessment.

■ Eligibility Criteria

Pre-Treatment Assessment

- Routine Blood Test
- Routine Urine Analysis
- Infectious Disease Testing
- Physical Examination
- X-Ray

Pre-Op Procedure

- MRI
- CT Scan
- Neurophysiology
- Medical Neurological Reports
- Medical History

EXTRACTION of tissue sources

Generally the entire procedure takes around 7-8 hrs including 1-2 hrs of source aspiration, 2-3 hrs of stem cell isolation and another 1-2 hrs in injecting cells. The processing of sample is done in a state-of-the-art class 10000 clean room facility wherein we strictly adhere to maintain quality of standards. Wherein the extracted sources undergo minimum manipulation such as been spun in a centrifuge to cull out a stem cells.

TARGETED delivery

Once isolated, intensified and ready for reinstalling back into the body, we work out different mode of implantation: depending upon patient's health condition.

■ Intravenous Administration

Cells will be infused directly into the vein to be able to circulate in the vascular system. This may further help to induce immediate signaling pathways to direct cells to the site of injury.

■ Intra-portal Hepatic Administration

Intraportal injection in hepatic portal vein is considerably the optimal route for stem cell transplantation to treat liver disorders because of faster engraftment and the avoidance of off-target accumulation.

REHABILITATION

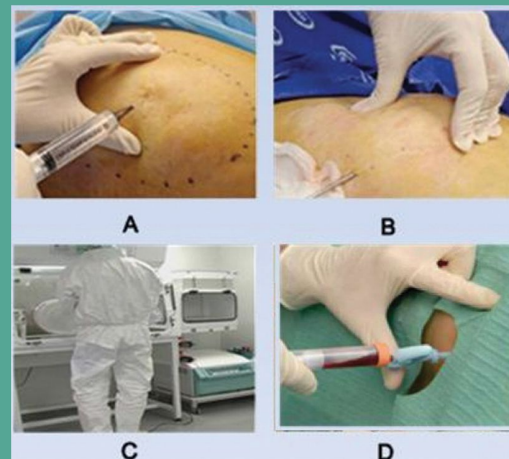
Post treatment care involves multiple reclamation therapies for accelerated recovery. Advancells is recommending range of therapies as discussed later.

Bone Marrow Extraction



- A. Application of local anesthesia.
- B. Bone Marrow collection by needle insertion in the hip bone.
- C. Isolation of Stem Cells in the clean room.
- D. Local administration of stem cells.

Adipose Tissue Extraction



- A. Application of tumescent anesthesia.
- B. Adipose Tissue collection by lipoaspiration.
- C. Isolation of Stem Cells in the clean room.
- D. Local administration of stem cells.

Why Should YOU choose Advancells?

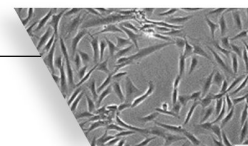
01 AUTOMATED and CLOSED System

At Advancells, stem cell therapy is performed under the supervision of medical experts in a multi speciality hospital and cells are processed in the state-of-the-art GMP compliant laboratory i.e. fully functional with automated equipments.



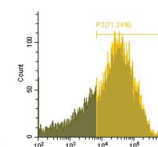
02 HIGH Quality of Cells

At Advancells, we ensure that cells are of best quality; and hence we perform a thorough **Quality Assessment** by experienced scientists. We provide a detailed certificate of analysis to each patient further authenticating the cell quantity and viability.



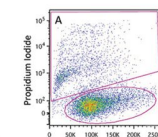
03 Disease-Specific MARKER Analysis

Our clinical research scientists do a thorough disease-specific marker analysis both **pre and post-treatment** to ensure subjective reduced expression levels of the same, thus showing evidence based assesment of improvement in each case.



04 HIGH Concentration Enriched with MULTIPLE Cell Population

The treatment procedure is performed using a high concentration of viable cells with multiple cell population, created from a very small portion of the tissue.



05 SAFE Treatment Procedure

The procedure is completely safe and has not detected any adverse events throughout the globe.



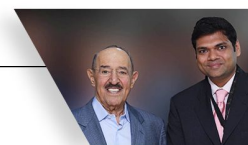
06 PATIENT SATISFACTION Assurance

Our medical team assures you treatment aesthetics and formal consent for your stem cell therapy. We prioritize patient follow-ups to ensure that your health improvements ascend with our therapeutic solutions.



07 Globally Recognized HEALTHCARE

Advancells Regenerative Medicine solutions have been globally recognized with the CMO Asia Healthcare Award for the Best Product Innovation and Quality Initiative. We were also privileged to host His Royal Highness, the king of Kuwait, for regenerative therapy during his 2017 visit.



Special services for International Patient

- Assistance in Visa and planning travel itinerary.
- Assistance in getting comfortable accommodation in nearby location.
- Travel Assistance for sight seeing.
- Assisting with your interpretation services.
- Assisting with multiple payment options.
- Expedite arrival with fast track registration.



Each Case is Special For Us,

Therefore Every Cell has to pass through a Stringent Quality Control Parameter.

■ Clinical Definition of Stem Cells

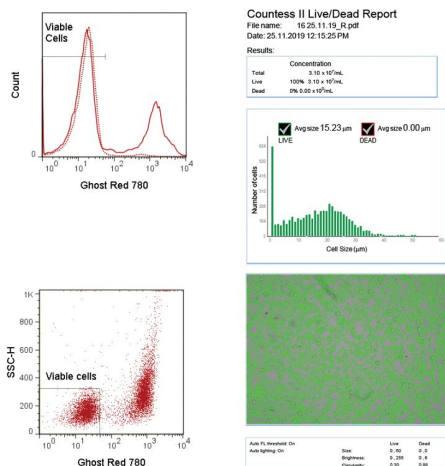
- Stem Cells are the mother cells of our body.
- They can divide unlimited times.
- Can differentiate into any cell type.
- Can be exploited to treat diseased condition.

At Advancells, we provide a high concentration of viable stem cells with enhanced differentiation potential for our treatment procedure. The patient derived stem cells are checked for mycoplasma and endotoxin contamination after isolation from the patient's body.

The stem cell suspension are checked for both gram-positive and gram-negative bacterial load during procedure for preventing any bacterial infection upon re-injecting them to the patient's body.

1.

Characteristics of Stem Cells



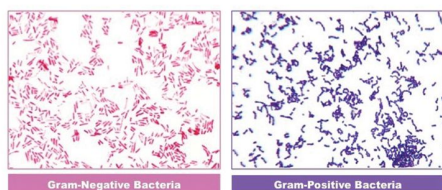
2.

Mycoplasma Detection



3.

Detection of bacterial containment



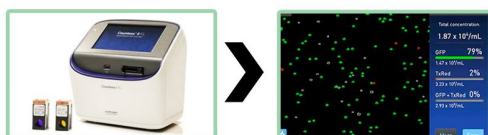
4.

Endotoxin Analysis



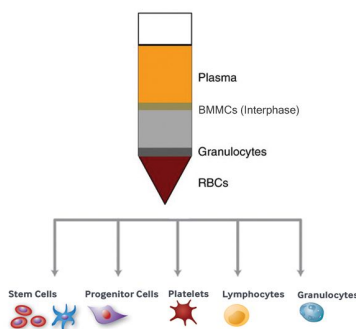
5.

Viable Cell Count & Analysis through Automated cell counter



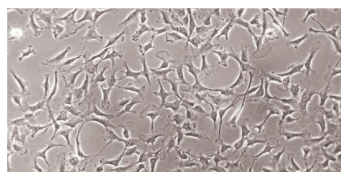
Analysis report		
Viable cell count at the time of dispatch: $x \times x^x$ cells		
Mycoplasma : Negative		Endotoxin : Negative (Qualitative Test > 0.2EU/ml)
Marker Analysis (Reference Document No: 0024GI001552):		
Markers Detected	Interpretation	Percentage
XX	Positive/ Negative	xx%
XX	Positive/ Negative	xx%
XX	Positive/ Negative	xx%

Technology Calling...



Bone Marrow derived mononuclear cells

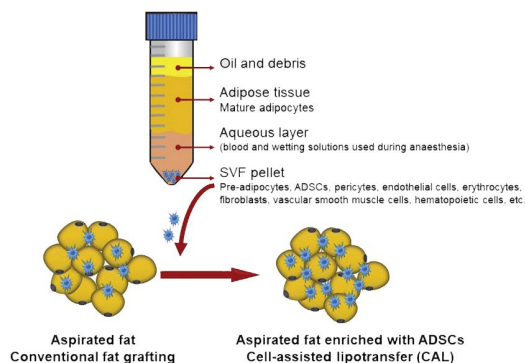
Neutrophil	72.3%
Eosinophil	1.8%
Lymphocyte	12.1%
Monocyte	2.8%
Nucleated Erythrocyte	8.9%
Blast Cells	1.6%



Bone Marrow Stem Cells promote vasculogenesis and differentiation to enhance blood circulation.

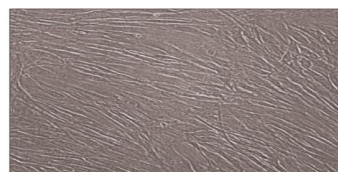
★ A wide range of cell types including Mesenchymal Stem Cells can be isolated from various niches depending upon requirements and can be used for effective clinical outcomes.
(Source: PubMed.gov)

The cells are extracted from other allogenic sources like umbilical cord Wharton's Jelly are further subjected to rigorous quality control processes; moreover, these cells display HLA-G receptors and hence do not cause any immunological reactions.



Stromal Vascular Fraction

Endothelial Cells	25%
Myeloid Cells	22%
Monocyte	20%
cKit ⁺ Progenitor Cells	5%
CXCR4 ⁺ Multipotent Cells	2.5%
PDGFR-β ⁺ Perivascular Cells	20%



Pre-Adipocytes are known to produce cells of neuronal origin and regularise inflammatory immune responses.

FACILITY & EXPERTISE



Stem Cell Therapy Success Rate

SYMPTOMS	IMPROVEMENT
Increased Stamina	60-70%
Reduced Abdominal Pain	30-40%
Reduced Weakness	60-70%

Rehab is *important*

Post stem cell therapy :

- Alcohol Abuse Therapy
- Dietary Therapy

How should I choose a good center for stem cell therapy?

The following criteria should
be kept in mind:

- A center with all types of regulatory compliance & certifications.
- Specialized in offering safe & viable stem cells which is further certified through CoA.
- A centre with good technical expertise & good infrastructure.



People suffering from liver diseases require long-term medical management, understanding, and care. Besides seeking treatment from experienced medical personnel, the multi-modal treatment array might include a variety of therapies based on dietary practices and alcohol abuse treatments to aid their improvement with stem cell treatment.

- Improve alcohol abuse habits.
- Reduce fatigue and weakness.
- Improve diet and lifestyle choices.
- Reduce abdominal pain and uneasiness.

Let's Hear it from the Patients..

■ MR. D K, 40YRS

Mr. D K had been a heavy drinker resulting in early signs of liver degeneration. His doctors suggested him a transplant due to the possibility of severe cirrhosis but he underwent stem cell therapy with a hope of regeneration and liver condition improvement. After 3 months of treatment, major markers of total Bill rubin showed decrease and markers such as SGPT and Phosphate are well within normal range now, encouraging better liver functioning.

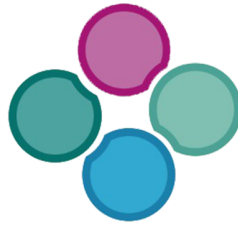
■ MR. SHAILENDRA SINGH, 42YRS

Mr. Shailendra was suffering from non-alcoholic fatty liver disease and diabetes. Mr. Singh had improper bowel and bladder movements, low platelets, and low weight. After three months, Mr. Singh reported betterment in his platelet count and liver markers. Although Mr. Singh did not see an increase in weight, his health and liver function showed good improvements.



Certifications





Advancells

G R O U P

Shaping the Future




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