Liver support devices

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ALF has a high mortality in the range of 50–80%. Extra corporeal liver support systems have the potential to provide temporary support to bridge patients with ALF to LT or spontaneous recovery . Artificial liver support devices function as ‘dialysis’ machines, which filter and adsorb toxic substances such as bilirubin, bile acids, metabolites of aromatic amino acids, medium-chain fatty acids and cytokines without significant loss of albumin from the circulation. Some examples of commonly available artificial liver support systems are the Molecular Adsorbent ® Recirculating System (MARS ; Gambro, Stockholm, Sweden) ® and Hepa Wash (Hepa Wash GmbH, Munich, Germany). Biological liver support uses whole animal or human liver, and the liver support–detoxification is achieved by portal and/ or artery perfusion. Some examples of commonly available biological liver support systems are the Extracorporeal Liver ® Assist Device (ELAD ; Vital Therapies Inc., San Diego, CA, ® USA) and the HepatAssist system (Alliqua Inc., Langhorne, PA, USA).

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