

## **INTRODUCTION :**

- Liver transplantation is a successful treatment option, with its capacity for increasing the one year expectancy by more than 80% in chronic liver diseases and liver failure (*SO Yeon Kim et al.,2007*)
- Living related liver transplantation was initially developed to overcome severe organ shortage for pediatric patients. However, LRLT is more technically challenging than cadaveric liver transplantation and liver resection for the treatment of various pathological conditions (*Muisan P et al.,2007*)
- It requires thorough understanding of the intra- and extra-hepatic relationship between the portal vein, hepatic artery, biliary tract and hepatic vein as well as their respective contributions to liver pathology (*Imamura H, et al.,2007*)
- Donor liver resection must be performed in a way that results in a well vascularized graft without damage to the remaining liver of the donor (*Schroeder T et al.,2006*).
- The radiologist plays an important role in the evaluation of the living donor to define the condition under which graft donation is contraindicated and to identify anatomic variations that may alter the surgical approach (*Sahani D et al.,2004*).
- MSCT angiography accurately depicts the vascular anatomy in a form that is helpful to the transplantation surgeon, rarely candidates are excluded because of vascular anatomy, but the surgeon frequently alters surgical plans on the basis of CT data (*Harms J et al.,2005*)
- MSCT scanners are used to obtain arterial phase & portal dominant phase images following the intravenous injection of CM, after which 3-dimensional maximum - intensity-projection & volume-rendered images are created, the vascular anatomy is evaluated, the presence of variants especially those considered relative or absolute contraindication, those requiring reconstruction or those potentially altering the surgical approach (*Ana Alonso-Torr. et al.,2005*)