



Medical Policy

Policy: 200301

Initial Effective Date: 03/15/2003

SUBJECT: Small Bowel, Small Bowel-Liver and Multivisceral Transplantation

Annual Review Date: 05/08/2018

Last Revised Date: 05/08/2018

Prior approval is required for some or all procedure codes listed in this Corporate Medical Policy.

Definition: Small bowel transplantation is a proposed treatment for irreversible intestinal failure. Intestinal failure is the inability of the small intestine to adequately absorb nutrients and fluids due to severe gastrointestinal disease or short bowel syndrome. Short bowel syndrome is a malabsorptive disorder caused by disease (e.g., Crohn's disease, ischemia, tumor) or surgical removal of a significant portion of the small intestine. Small bowel transplantation involves procurement of living donor or cadaver donor small bowel (partial or complete donor enterectomy), excision of the existing diseased recipient small bowel and implantation of donor small bowel into the recipient (small bowel transplantation).

Small bowel-liver transplantation is a proposed treatment for individuals with impending liver failure due to irreversible liver disease, along with irreversible intestinal failure. Small bowel-liver transplantation involves procurement of living donor or cadaver donor small bowel (partial or complete donor enterectomy) and liver (donor hepatectomy), excision of the existing diseased recipient small bowel and liver and implantation of donor small bowel and liver into the recipient (small bowel-liver transplantation).

Multivisceral transplantation is a proposed treatment for irreversible intestinal and liver failure *and* irreversible failure of one or more additional organs (i.e., stomach, duodenum, colon and/or pancreas). Multivisceral transplantation involves procurement of living donor or cadaver donor small bowel (partial or complete donor enterectomy), liver (donor hepatectomy) *and* one or more additional donor organs (stomach, duodenum, colon and/or pancreas), excision of the existing diseased recipient small bowel/liver and stomach, duodenum, colon and/or pancreas and implantation of the donor small bowel/liver and stomach, duodenum, colon and/or pancreas into the recipient (multivisceral transplantation).

Individuals with intestinal failure are treated with total parental nutrition (TPN), with or without enteral feeding supplementation, which delivers nutrients intravenously to maintain adequate nutritional status. Permanent TPN dependence is associated with a high-risk for life-threatening complications, including TPN-induced liver disease, recurrent episodes of sepsis and loss of vascular access. The goal of small bowel, small bowel-liver or multivisceral transplantation is to restore intestinal function and reduce or eliminate the need for TPN.



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Medical Necessity:

I. Small bowel transplantation: The Company considers small bowel transplantation (**CPT Codes 44132, 44133, 44135, 44136, 44715, 44720, 44721 and applicable ICD-10-PCS Procedure Codes**) **medically necessary** and eligible for reimbursement providing that *all* of the following medical criteria are met:

- Diagnosis of irreversible intestinal failure is established following an evaluation at a center that provides intestinal failure/rehabilitation services; and
- Dependent on total parental nutrition (TPN); and
- Failure of TPN[†] or unwillingness to accept long-term TPN despite documented discussion of the risks and long term sequelae associated with transplantation surgery; and
- Facility is a designated small bowel transplantation center with active status as determined by Organ Procurement and Transplantation Network (OPTN); and
- Willingness and ability to participate in pre and post-operative rehabilitation programs and follow-up; and
- Selection criteria required by the institution performing small bowel transplantation have been met.

II. Small bowel-liver transplantation: The Company considers small bowel-liver transplantation (**CPT Codes 44132, 44133, 44135, 44136, 44715, 44720, 44721, 47133, 47135, 47136, 47140, 47141, 47142, 47143, 47144, 47145, 47146, 47147, HCPCS Code S2053 and applicable ICD-10-PCS Procedure Codes**) **medically necessary** and eligible for reimbursement providing that *all* of the following medical criteria are met:

- Diagnosis of irreversible intestinal failure is established following an evaluation at a center that provides intestinal failure/rehabilitation services; and
- Dependent on total parental nutrition (TPN); and
- Failure of TPN[†] or unwillingness to accept long-term TPN despite documented discussion of the risks and long term sequelae associated with transplantation surgery; and
- Impending or overt liver failure^{††}; and
- Facility is a designated small bowel-liver transplantation center with active status as determined by Organ Procurement and Transplantation Network (OPTN); and
- Willingness and ability to participate in pre and post-operative rehabilitation programs and follow-up; and
- Selection criteria required by the institution performing small bowel-liver transplantation have been met; and
- Criteria listed in InterQual subset Transplantation, Liver are met.

III. Multivisceral transplantation: The Company considers multivisceral transplantation (**CPT Codes 44132, 44133, 44135, 44136, 44715, 44720, 44721, 47133, 47135, 47136, 47140, 47141, 47142, 47143, 47144, 47145, 47146, 47147, 48550, 48551, 48552, 48554, HCPCS Codes S2053, S2054, S2055, S2152 and applicable ICD-10-PCS Procedure Codes**) **medically necessary** and eligible for reimbursement providing that *all* of the following medical criteria are met:



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- Diagnosis of irreversible intestinal failure is established following an evaluation at a center that provides intestinal failure/rehabilitation services; and
- Dependent on total parental nutrition (TPN); and
- Failure of TPN[†] or unwillingness to accept long-term TPN despite documented discussion of the risks and long term sequelae associated with transplantation surgery; and
- Facility is a designated multivisceral transplantation center with active status as determined by Organ Procurement and Transplantation Network (OPTN); and
- Willingness and ability to participate in pre and post-operative rehabilitation programs and follow-up; and
- Selection criteria required by the institution performing multivisceral transplantation have been met; and
- Impending or overt liver failure^{††} and criteria listed in InterQual subset Transplantation, Liver are met; and
- Failure of **one or more additional** visceral organs (stomach, duodenum, colon and/or pancreas [subject to medical necessity criteria listed in Corporate Medical Policy 200210: Pancreas Transplantation]).

[†]Failure of TPN is defined as **any** of the following:

- Impending or overt liver failure^{††} due to TPN-induced liver injury; or
- Thrombosis of two or more central veins (e.g., jugular, subclavian, femoral); or
- Central line sepsis requiring hospitalization twice or more within 12 months; or
- Single episode of central line related fungemia, septic shock and/or acute respiratory distress syndrome; or
- Frequent episodes of severe dehydration despite intravenous fluid supplementation with TPN.

^{††}Impending or overt liver failure is defined as **all** of the following:

- Manifestations of liver failure, including elevated serum bilirubin, portal hypertension, splenomegaly, thrombocytopenia, gastroesophageal varices, stomal bleeding, coagulopathy, hepatic fibrosis and/or cirrhosis; and
- Causes of reversible liver failure have been excluded.

Contraindications for transplantation include, but are not limited to, the following:

- Significant cardiopulmonary disease; or
- Cerebral edema; or
- Significant system or multi-system disease; or



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- Currently active or recurring infection (regional or systemic); or
- Uncontrolled malignancy; or
- Regular or periodic medications are required for which transplantation would be a contraindication; or
- Medical-surgical clearance is not obtained from appropriate specialty provider(s) when significant end-stage organ disease is present; or
- Ongoing substance abuse^{†††}; or
- Uncontrolled major psychiatric illness; or
- Non-compliance has been demonstrated or is likely to occur; or
- Other life-limiting illness.
 - In regards to Human Immunodeficiency Virus (HIV) infection: Well-controlled, Stage 1-2 HIV is generally considered a relative contraindication.
 - However, Acquired Immune Deficiency Syndrome (AIDS) is considered an absolute contraindication (diagnosis of AIDS based on Centers for Disease Control and Prevention [CDC] definition of CD4 count <200 cells/mm³), unless *all* of the following are noted:
 - CD4 count \geq 200 cells/mm³ for >6 months; and
 - Serum HIV-1 RNA undetectable; and
 - On stable anti-retroviral therapy >3 months; and
 - No other complications from AIDS, such as opportunistic infection (e.g., tuberculosis, aspergillus, pneumocystis jiroveci pneumonia, toxoplasmosis, cryptococcal meningitis, disseminated fungal infection) or neoplasm (e.g., Kaposi's sarcoma, non-Hodgkin's lymphoma).

^{†††} **An individual with a history suggestive of an alcohol or substance use disorder must have been evaluated by a multidisciplinary committee, minimally made up of a chemical dependency specialist, an internist, and a surgeon, who have determined the individual's suitability for transplantation. An individual meeting Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria (see below) for a substance use disorder (e.g., alcohol, cannabis, opioids, etc.) with mild, moderate, or severe severity must (1) sign a contract pledging not to use any addictive substance (unless under a doctor's order) and agree to unlimited, random alcohol and/or drug screening; (2) demonstrate abstinence from all addictive substances for at least 12 months prior to listing, or at least 3 months abstinence and at least 3 months current participation in an active recovery program; (3) demonstrate insight into their past substance misuse, an understanding of how substance misuse has impacted their health and adequate coping skills for dealing with stressors; and (4) possess a stable family and social network who will support the individual's commitment to abstinence (individuals not meeting conditions 1-4 may qualify because of medical urgency).**



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DSM-IV-TR Criteria for Substance Abuse

- A. The individual has a maladaptive pattern of substance use with clinically significant impairment or distress manifested by one or more of the following criteria, occurring within a 12-month period:
1. Recurrent substance use resulting in a failure to fulfill major obligations at work, school, or home
 2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)
 3. Recurrent substance-related legal problems
 4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication)
- B. The symptoms have never met the criteria for substance dependence for this class of substance (i.e., a diagnosis of substance dependence preempts a diagnosis of substance abuse).

NOTE: An individual being considered for small bowel transplantation in conjunction with liver transplantation or multivisceral transplantation is subject to medical necessity criteria for liver transplantation (InterQual subset Transplantation, Liver) and/or pancreas transplantation (Corporate Medical Policy 200210), as well as medical necessity criteria contained within this policy.

Documentation Requirements:

The Company reserves the right to request additional documentation as part of its coverage determination process. The Company may deny reimbursement when it has determined that the services performed were not medically necessary, investigational or experimental, not within the scope of benefits afforded to the member and/or a pattern of billing or other practice has been found to be either inappropriate or excessive. Additional documentation supporting medical necessity for the services provided must be made available upon request to the Company. Documentation requested may include patient records, test results and/or credentials of the provider ordering or performing a service. The Company also reserves the right to modify, revise, change, apply and interpret this policy at its sole discretion, and the exercise of this discretion shall be final and binding.

Prior approval is required for CPT Codes 44132, 44133, 44135, 44136, 44715, 44720, 44721, 47133, 47135, 47136, 47140, 47141, 47142, 47143, 47144, 47145, 47146, 47147, 48550, 48551, 48552, 48554, HCPCS Codes S2053, S2054, S2055, S2152, ICD-10-CM Procedure Codes DT80ZZ, 0FT00ZZ, 0FTG0ZZ, 0DY60Z0, 0DY60Z1, 0DY80Z0, 0DY80Z1, 0DYE0Z0, 0DYE0Z1, 0FY00Z0, 0FY00Z1, 0FYG0Z0, 0FYG0Z1.



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Sources of Information:

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| Applicable Code(s): | |
| CPT: | 44132, 44133, 44135, 44136, 44715, 44720, 44721, 47133, 47135, 47136, 47140, 47141, 47142, 47143, 47144, 47145, 47146, 47147, 48550, 48551, 48552 and 48554 |
| HCPCS: | S2053, S2054, S2055 and S2152 |
| ICD10 Procedure Codes: | DT80ZZ, 0FT00ZZ, 0FTG0ZZ, 0DY60Z0, 0DY60Z1, 0DY80Z0, 0DY80Z1, 0DYE0Z0, 0DYE0Z1, 0FY00Z0, 0FY00Z1, 0FYG0Z0, 0FYG0Z1 |

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