**Definition:** Therapeutic apheresis is the process of separation and selective removal of a harmful blood constituent (e.g., leukocytes [white blood cells], erythrocytes [red blood cells], plasma, or platelets) from circulating whole blood and the subsequent reinfusion of nontargeted components into the bloodstream. The theoretical benefit of apheresis is that the decrease in the concentration of a harmful plasma constituent will improve the disease course.

Types of apheresis include the following:

- **Cytapheresis:**
  
  Cytapheresis is the selective isolation and removal of blood cellular components (e.g., leukocytes [leukapheresis] or erythrocytes [erythrocytapheresis]) from circulating whole blood. The remainder of the blood may be supplemented with replacement fluid such as colloid and/or crystalloid solution. This procedure can be used therapeutically or in preparation of blood components for other purposes.

- **Extracorporeal immunoadsorption:**

  Extracorporeal immunoadsorption is a therapeutic procedure during which plasma is separated from the blood and passed through a specific adsorption column, which has a capacity to remove immunoglobulins by specifically binding them to the active component (e.g., staphylococcal protein A) of the device. The unbound components are then reinfused with supplemental whole blood constituents as necessary.

- **Extracorporeal photopheresis (ECP):**

  ECP is a therapeutic procedure during which the buffy coat fraction of anticoagulated blood is treated with a photoactive compound (e.g., psoralens), exposed to ultraviolet A (UVA) light, and subsequently re-infused. Some techniques involve ingestion of an oral dose of a photo-activatable drug by the patient prior to leukapheresis and lymphocyte UVA irradiation.
• **Low-density lipoprotein (LDL) apheresis:**
  LDL apheresis is the selective removal of LDL particles from the blood, followed by the reinfusion of the remaining components.

• **Plasmapheresis and Therapeutic plasma exchange (TPE):**

  Plasmapheresis is a procedure during which blood is passed through a medical device, which separates and removes plasma from the other blood components without the use of replacement solution. Plasmapheresis may be performed as part of a plasma donation process or to remove harmful antibodies from the circulatory system.

  TPE is a procedure during which blood is passed through a medical device, which separates plasma from the other blood components. The plasma is removed and replaced with a solution such as a colloid (e.g., albumin and/or plasma) or crystalloid/colloid combination solution.

• **Plateletpheresis:**

  Plateletpheresis (thrombocytapheresis) is a procedure during which blood is passed through a medical device, which separates and removes platelets from the other blood components. This procedure is used in preparation of blood components (e.g., platelet apheresis).

**Medical Necessity:**

I. **Cytapheresis:** The Company considers cytapheresis (CPT Codes 36511, 36512, 36513, and applicable ICD-10-CM Procedure Codes) medically necessary and eligible for reimbursement providing that at least one of the following clinical conditions is present:

   - Lymphoid, myeloid, monocytic, other specified, and unspecified leukemias
   - Hereditary hemochromatosis
   - Polycythemia vera
   - Sickle-cell disorders

II. **Plasmapheresis and plasma exchange:** The Company considers plasmapheresis and plasma exchange (CPT Code 36514 and applicable ICD-10-CM Procedure Codes) medically necessary and eligible for reimbursement providing that at least one of the following clinical conditions is present:

   - Streptococcus group A/B, as the cause of disease classified elsewhere (PANDAS)
   - Waldenström’s macroglobulinemia
   - Multiple myeloma
   - Monoclonal gammopathy
   - Hemolytic uremic syndrome (HUS)
• Cryoglobulinemia
• Hypergammaglobulinemia, unspecified (Paraproteinemic demyelinating neuropathies associated with IgA, IgG)
• Multiple sclerosis (as second-line treatment of steroid-resistant exacerbations during relapse)
• Neuromyelitis optica (Devic’s syndrome)
• Wilson’s disease
• Guillain-Barré syndrome
• Chronic inflammatory demyelinating polyneuritis (CIDP)
• Sydenham’s chorea
• Myasthenia gravis
• Hypersensitivity angiitis (Goodpasture’s syndrome)
• Thrombotic microangiopathy
• Wegener’s granulomatosis with renal involvement
• Systemic lupus erythematosus
• Complications of bone marrow transplant
• Complications of kidney transplant
• Heart transplant rejection
• Complications of liver transplant
• Complications of stem cell transplant

The Company considers plasmapheresis and plasma exchange (CPT Code 36514 and applicable ICD-10-CM Procedure Codes) not medically necessary and not eligible for reimbursement for all other indications, including, but not limited to:

• Chronic or secondary progressive multiple sclerosis; or
• Neuropathy associated with immunoglobulin M gammopathy.

III. Extracorporeal immunoadsorption: The Company considers extracorporeal immunoadsorption (CPT Code 36515 and applicable ICD-10-CM Procedure Codes) medically necessary and eligible for reimbursement providing that at least one of the following medical criteria is met:

Plasma exchange, with or without immunoadsorption, for any of the following indications, including, but not limited to:

• Idiopathic thrombocytopenic purpura (ITP); or
• Thrombotic thrombocytopenic purpura (TTP); or
• Extracorporeal immunoadsorption (staphylococcus protein A column) when used as an adjunct to standard therapy for the following indication, including, but not limited to:

• Rheumatoid arthritis
Frequency limitations: The Company requires additional documentation identifying significant disease activity and specific circumstances supporting medical necessity for additional treatments when > 8 treatment sessions are requested within a six-month time period.

IV. LDL apheresis: The Company considers LDL apheresis (CPT Code 36516 and HCPCS Code S2120) medically necessary and eligible for reimbursement providing that at least one of the following medical criteria is met:

- Functional hypercholesterolemic homozygotes with LDL cholesterol ≥ 300 mg/dL (or non-HDL cholesterol ≥ 330 mg/dL); or
- Functional hypercholesterolemic heterozygotes with LDL cholesterol ≥ 300 mg/dL (or non-HDL cholesterol ≥ 330 mg/dL) and 0-1 other risk factors; or
- Functional hypercholesterolemic heterozygotes with LDL cholesterol ≥ 200 mg/dL (or non-HDL cholesterol ≥ 230 mg/dL) and high risk characteristics such as ≥ 2 other risk factors or high lipoprotein (a) ≥ 50 mg/dL using an isoform insensitive assay; or
- Functional hypercholesterolemic heterozygotes with LDL cholesterol ≥ 160 mg/dL (or non-HDL cholesterol ≥ 190 mg/dL) and very high-risk characteristics (established coronary heart disease [CHD†], other cardiovascular disease, or diabetes)

AND

All of the following:

- Severe, refractory familial hypercholesterolemia; and
- Failure of ≥ 6-month trial of diet therapy despite compliance; and
- Failure of ≥ 6-month trial of continuous hypolipidemic pharmacotherapy from at least two separate drug classes in maximal dose regimen (e.g., bile acid sequestrants, HMG-CoA reductase inhibitors, fibric acid derivatives, PCSK9 inhibitors, niacin/nicotinic acids)

NOTE: Consider LDL apheresis during pregnancy if there is significant atherosclerotic disease or if the patient has homozygous FH.

V. Extracorporeal photopheresis: The Company considers extracorporeal photopheresis (CPT Code 36522 and applicable ICD-10-CM Procedure Codes) medically necessary and eligible for reimbursement providing that at least one of the following medical criteria is met:

- Palliative treatment of skin manifestations of cutaneous T-cell lymphoma (CTCL) unresponsive to standard medical therapy; or
- Acute cardiac allograft rejection refractory to standard immunosuppressive drug treatment; or
- Chronic graft versus host disease refractory to standard immunosuppressive drug treatment
AND

At least one of the following clinical conditions is present:

- Mycosis fungoides
- Sélzary’s syndrome
- Graft-versus-host disease
- Complications of transplanted heart
- Complications of transplanted bone marrow or stem cells

The Company considers coronary heart disease as any of the following:

- Coronary artery disease as determined by coronary angiography; or
- History of myocardial infarction; or
- Coronary artery bypass surgery; or
- Percutaneous transluminal coronary angioplasty or alternative revascularization procedure (e.g., stent); or
- Progressive angina documented by cardiac stress test and cardiac computed tomography.

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.
Sources of Information:


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### Applicable Code(s):

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