**TABLE S1**

**ICD-9 list of diagnoses**

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Subgroup** | **code** | **Diagnosis Description** |
| **Endocrine** | Thyroid disease | 243 | CONGENITAL HYPOTHYROIDISM |
|   |   | 2449 | UNSPECIFIED ACQUIRED HYPOTHYROIDISM |
|   |   | 2409 | GOITER, UNSPECIFIED |
|   |   | 2411 | NONTOXIC MULTINODULAR GOITER |
|   |   | 2419 | UNSPECIFIED NONTOXIC NODULAR GOITER |
|   |   | 2429 | THYROTOXICOSIS WITHOUT MENTION OF GOITER OR OTHER CAUSE |
|   |   | 2440 | POSTSURGICAL HYPOTHYROIDISM |
|   |   | 2443 | OTHER IATROGENIC HYPOTHYROIDISM |
|   |   | 2448 | OTHER SPECIFIED ACQUIRED HYPOTHYROIDISM |
|   |   | 2450 | ACUTE THYROIDITIS |
|   |   | 2451 | SUBACUTE THYROIDITIS |
|   |   | 2452 | CHRONIC LYMPHOCYTIC THYROIDITIS |
|   |   | 2461 | DYSHORMONOGENIC GOITER |
|   |   | 2468 | OTHER SPECIFIED DISORDERS OF THYROID |
|   |   | 24200 | TOXIC DIFFUSE GOITER WITHOUT MENTION OF THYROTOXIC CRISIS |
|   |   | 24240 | THYROTOXICOSIS FROM ECTOPIC THYROID NODULE,WITHOUT CRISIS |
|   |   | 24290 | THYROTOXICOSIS WITHOUT GOITER; HYPERTHYROIDISM |
|   | Diabetes mellitus | 25001 | JUVENILE TYPE DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION |
|   |   | 25001 | TYPE I(JUVENILE TYPE), DIABETES MELLITUS WITHOUT COMPLICATION,NOT STATED AS UNCONTROLLED |
|   |   | 25003 | DIABETES MELLITUS WITHOUT COMPLICATION, TYPE I, UNCONTROLLED |
|   |   | 25011 | JUVENILE TYPE DIABETES MELLITUS WITH KETOACIDOSIS |
|   |   | 25011 | TYPE I (JUVENILE TYPE), DIABETES MELLITUS WITH KETOACIDOSIS, NOT STATED AS UNCONTROLLED |
|   |   | 25013 | DIABETES WITH KETOACIDOSIS, TYPE I, UNCONTROLLED |
|   |   | 25031 | JUVENILE DIABETES, NOT STATED AS UNCONTROLLED, WITH OTHER COMA |
|   |   | 25041 | TYPE I (JUVENILE TYPE) DIABETES WITH RENAL MANIFESTATIONS NOT STATED AS UNCONTROLLED |
|   |   | 25081 | JUVENILE DIABETES, NOT STATED AS UNCONTROLLED,+SPEC. MANIFESTATIN |
|   |   | 25081 | TYPE I(JUVENILE TYPE),DIABETES WITH SPECIFIED MANIFESTATION NOT STATED AS UNCONTROLLED |
|   |   | 25083 | JUVENILE DIABETES, UNCONTROLLED, + SPEC. MANIFESTATIONS |
|   |   | 2500 | DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION |
|   |   | 2508 | DIABETES WITH OTHER SPECIFIED MANIFESTATIONS |
|   |   | 24900 | SECONDARY DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION, NOT STATED AS UNCONTROLLED, OR UNSPECIFIED |
|   |   | 24901 | SECONDARY DIABETES MELLITUS WITHOUT MENT. OF COMPLI. UNCONTROLLED |
|   |   | 25000 | TYPE II/UNSPECIFIED TYPE, DIABETES MELLITUS WITHOUT COMPLICATION, NOT STATED AS UNCONTROLLED |
|   |   | 25002 | TYPE II OR UNSPECIFIED TYPE, DIABETES MELLITUS, UNCONTROLLED |
|   |   | 25010 | TYPE II OR UNSPECIFIED TYPE, DIABETES MELLITUS WITH KETOACIDOSIS, NOT STATED AS UNCONTROLLED |
|   |   | 25050 | ADULT-ONSET DIABETES,NOT STATED AS UNCONTROLLED,+OPHTALMIC MANIFE |
|   |   | 25050 | TYPE II OR UNSPECIFIED TYPE,DIABETES WITH OPHTALMIC MANIFESTATION NOT STATED AS UNCONTROLLED |
|   |   | 25080 | TYPE II OR UNSPECIFIED TYPE,DIABETES WITH SPECIFIED MANIFESTATION NOT STATED AS UNCONTROLLED |
|   | Hypoglycemia | 2510 | HYPOGLYCEMIC COMA (NON-DIABETIC INSULIN COMA) |
|   |   | 2511 | OTHER SPECIFIED HYPOGLYCEMIA |
|   |   | 2512 | HYPOGLYCEMIA, UNSPECIFIED |
|   | Hyperlipidemia | 64803 | ANTEPARTUM DIABETES MELLITUS |
|   | Obesity | 2779 | UNSPECIFIED DISORDER OF METABOLISM |
|   |   | 2780 | OVERWEIGHT AND OBESITY |
|   |   | 2781 | LOCALIZED ADIPOSITY |
|   |   | 27800 | OBESITY, UNSPECIFIED |
|   |   | 27801 | MORBID OBESITY |
|   |   | 27802 | OVERWEIGHT |
|   | PTHL | 252 | DISORDERS OF PARATHYROID GLAND |
|   |   | 2519 | UNSPECIFIED DISORDER OF PANCREATIC INTERNAL SECRETION |
|   |   | 2520 | HYPERPARATHYROIDISM |
|   |   | 2521 | HYPOPARATHYROIDISM |
|   |   | 2532 | PANHYPOPITUITARISM |
|   |   | 2533 | PITUITARY DWARFISM |
|   |   | 2535 | DIABETES INSIPIDUS |
|   |   | 2536 | OTHER DISORDERS OF NEUROHYPOPHYSIS |
|   |   | 2540 | PERSISTENT HYPERPLASIA OF THYMUS |
|   |   | 2548 | OTHER SPECIFIED DISEASES OF THYMUS GLAND |
|   |   | 25200 | HYPERPARATHYROIDISM, UNSPECIFIED |
|   |   | 25202 | SECONDARY HYPERPARATHYROIDISM, NON-RENAL |
|   | Adrenal | 2550 | CUSHING'S SYNDROME |
|   |   | 2551 | HYPERALDOSTERONISM |
|   |   | 2552 | ADRENOGENITAL DISORDERS |
|   |   | 2553 | OTHER CORTICOADRENAL OVERACTIVITY |
|   |   | 2554 | CORTICOADRENAL INSUFFICIENCY |
|   |   | 2555 | OTHER ADRENAL HYPOFUNCTION |
|   |   | 2558 | OTHER SPECIFIED DISORDERS OF ADRENAL GLANDS |
|   |   | 2559 | UNSPECIFIED DISORDER OF ADRENAL GLANDS |
|   |   | 25510 | HYPERALDOSTERONISM, UNSPECIFIED |
|   |   | 25513 | BARTTER'S SYNDROME |
|   |   | 25541 | GLUCOCORTICOID DEFICIENCY |
|   |   | 25542 | MINERALOCORTICOID DEFICIENCY |
|   |   | 2550 | CUSHING'S SYNDROME |
|   |   | 2551 | HYPERALDOSTERONISM |
|   |   | 2552 | ADRENOGENITAL DISORDERS |
|   |   | 2553 | OTHER CORTICOADRENAL OVERACTIVITY |
|   |   | 2554 | CORTICOADRENAL INSUFFICIENCY |
|   |   | 2555 | OTHER ADRENAL HYPOFUNCTION |
|   |   | 2558 | OTHER SPECIFIED DISORDERS OF ADRENAL GLANDS |
|   |   | 2559 | UNSPECIFIED DISORDER OF ADRENAL GLANDS |
|   | Sex hormone diseases | 2561 | OTHER OVARIAN HYPERFUNCTION |
|   |   | 2562 | POSTABLATIVE OVARIAN FAILURE |
|   |   | 2564 | POLYCYSTIC OVARIES |
|   |   | 2572 | OTHER TESTICULAR HYPOFUNCTION |
|   |   | 2590 | DELAY IN SEXUAL DEVELOPMENT/PUBERTY,NOT ELSEWHERE CLASSIFIED |
|   |   | 2591 | PRECOCIOUS SEXUAL DEVELOPMENT AND PUBERTY, NOT ELSEW.CLASSIF. |
|   |   | 25639 | OTHER OVARIAN FAILURE |
|   |   | 25951 | ANDROGEN INSENSITIVITY SYNDROME |
|   | OTHER | 2598 | OTHER SPECIFIED ENDOCRINE DISORDERS |
|   |   | 2599 | UNSPECIFIED ENDOCRINE DISORDER |
| **Metabolic** |   | 273 | DISORDERS OF PLASMA PROTEIN METABOLISM |
|   |   | 2700 | DISTURBANCES OF AMINO-ACID TRANSPORT |
|   |   | 2701 | PHENYLKETONURIA (PKU) |
|   |   | 2702 | OTHER DISTURBANCES OF AROMATIC AMINO-ACID METABOLISM |
|   |   | 2703 | DISTURBANCES OF BRANCHED-CHAIN AMINO-ACID METABOLISM |
|   |   | 2704 | DISTURBANCES OF SULPHUR-BEARING AMINO-ACID METABOLISM |
|   |   | 2706 | DISORDERS OF UREA CYCLE METABOLISM |
|   |   | 2707 | OTHER DISTURBANCES OF STRAIGHT-CHAIN AMINO-ACID METABOLISM |
|   |   | 2708 | OTHER SPECIFIED DISORDERS OF AMINO-ACID METABOLISM |
|   |   | 2709 | UNSPECIFIED DISORDER OF AMINO-ACID METABOLISM |
|   |   | 2710 | GLYCOGENOSIS |
|   |   | 2712 | HEREDITARY FRUCTOSE INTOLERANCE |
|   |   | 2713 | INTEST.DISACCHARIDASE DEFIC.+ DISACCHARIDE MALABSORPTION |
|   |   | 2718 | OTH.SPEC.DISORDERS OF CARBOHYDRATE TRANSPORT + METABOLISM |
|   |   | 2719 | UNSPECIFIED DISORDER OF CARBOHYDRATE TRANSPORT AND METABOLISM |
|   |   | 2720 | PURE HYPERCHOLESTEROLEMIA |
|   |   | 2721 | PURE HYPERGLYCERIDEMIA |
|   |   | 2722 | MIXED HYPERLIPIDEMIA |
|   |   | 2724 | OTHER AND UNSPECIFIED HYPERLIPIDEMIA |
|   |   | 2726 | LIPODYSTROPHY |
|   |   | 2727 | LIPIDOSES |
|   |   | 2728 | OTHER DISORDERS OF LIPOID METABOLISM |
|   |   | 2729 | UNSPECIFIED DISORDER OF LIPOID METABOLISM |
|   |   | 2738 | OTHER DISORDERS OF PLASMA PROTEIN METABOLISM |
|   |   | 2739 | UNSPECIFIED DISORDER OF PLASMA PROTEIN METABOLISM |
|   |   | 2740 | GOUTY ARTHROPATHY |
|   |   | 2750 | DISORDERS OF IRON METABOLISM |
|   |   | 2751 | DISORDERS OF COPPER METABOLISM |
|   |   | 2752 | DISORDERS OF MAGNESIUM METABOLISM |
|   |   | 2753 | DISORDERS OF PHOSPHORUS METABOLISM |
|   |   | 2754 | DISORDERS OF CALCIUM METABOLISM |
|   |   | 2764 | MIXED ACID-BASE BALANCE DISORDER |
|   |   | 27411 | URIC ACID NEPHROLITHIASIS |
|   |   | 27540 | UNSP. DISORDER OF CALCIUM METABOLISM |
|   |   | 27785 | DISORDERS OF FATTY ACID OXIDATION |
|   |   | 27786 | PEROXISOMAL DISORDERS |
|   |   | 27787 | DISORDERS OF MITOCHONDRIAL METABOLISM |
|   |   | 27789 | OTHER SPECIFIED DISORDERS OF METABOLISM |
|   |   | 2710 1 | GLYCOGEN STORAGE DISEASE |