

ACLA Proposal
Vitamin D - Additional ICD's and Supporting References

ICD-9 code	Description	Reference
017.90	Tuberculosis of other specified organs, unspecified examination	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51. UpToDate® Causes of vitamin D deficiency and resistance (Reference 32)
135	Sarcoidosis	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
194.1	Malignant neoplasm of parathyroid gland	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
227.1	Benign neoplasm of parathyroid gland	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
242.00	Toxic diffuse goiter without mention of thyrotoxic crisis or storm	1. Miani C, Bracale AM, Bresadola V, Motz E. Concomitant primary hyperparathyroidism, Graves' disease and vitamin D deficiency. Acta Otorhinolaryngol Ital. 2003 Jun;23(3):199-202. 2. Nagasaka S, Shinohara Y, Kubota K, Murakami T. Osteomalacia in a vitamin D-deficient woman with Graves' disease. Endocr J. 2001 Aug;48(4):515-6. No abstract available. 3. Yamashita H, Noguchi S, Takatsu K, Koike E, Murakami T, Watanabe S, Uchino S, Yamashita H, Kawamoto H. High prevalence of vitamin D deficiency in Japanese female patients with Graves' disease. Endocr J. 2001 Feb;48(1):63-9.
242.01	Toxic diffuse goiter with mention of thyrotoxic crisis or storm	See 242.00
242.90	Thyrotoxicosis without mention of goiter or other cause, and without mention of thyrotoxic crisis or storm	See 242.00
242.91	Thyrotoxicosis without mention of goiter or other cause, with mention of thyrotoxic crisis or storm	See 242.00
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	1. David Martins, Myeles Wolf, Deyu Pan, Ashraf Zadshir, Naureen Tareen, Ravi Thadani, Arnold Felsenfeld, Barton Levine, Rajnish Mehotra, Keith Norris "Prevalence of Cardiovascular Risk Factors and the Serum Levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey" Arch Intern Med 167: 1159 – 1165 (2007). 2. John H. Lee, James H. O'Keefe, David Bell, Donald D. Hensrud, Michael F. Holck. "Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor?" Journal of the American College of Cardiology 52 (24): 1949 – 1956 (2008).
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	See 250.00
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	See 250.00

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250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	See 250.00
250.10	Diabetes with ketoacidosis , type II or unspecified type, not stated as uncontrolled	See 250.00
250.11	Diabetes with ketoacidosis , type I [juvenile type], not stated as uncontrolled	See 250.00
250.12	Diabetes with ketoacidosis , type II or unspecified type, uncontrolled	See 250.00
250.13	Diabetes with ketoacidosis , type I [juvenile type], uncontrolled	See 250.00
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	See 250.00
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	See 250.00
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	See 250.00
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	See 250.00
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	See 250.00
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	See 250.00
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	See 250.00
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	See 250.00
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	See 250.00
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	See 250.00
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	See 250.00
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	See 250.00
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	See 250.00
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	See 250.00
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	See 250.00

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250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	See 250.00
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	See 250.00
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	See 250.00
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	See 250.00
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	See 250.00
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	See 250.00
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	See 250.00
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	See 250.00
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	See 250.00
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	See 250.00
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	See 250.00
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	See 250.00
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	See 250.00
252.00	Hyperparathyroidism, unspecified	1. Goltzman, D, Cole, DEC. Hypoparathyroidism. In Primer on the Metabolic Bone Diseases and Disorders of Bone Metabolism, American Society of Bone and Mineral Research 2006; 6:216.; 2. Fitzpatrick, LA, Arnold, A. Hypoparathyroidism. In: Endocrinology, 3rd ed, DeGroot, LJ, (Ed), Saunders, Philadelphia 1995 p.1123.

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	252 Hyperparathyroidism, unspecified	<p>3. Stone, MD, William J. and Rabin, MD, Pauline L., End-Stage Renal Disease, An Integrated Approach, Renal Physiology and Pathophysiology of Renal Failure, Academic Press, 1983: 2-25.</p> <p>4. Block, MD, Geoffrey, et.al., Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, The New England Journal of Medicine, April 8, 2004:1516-1525.</p> <p>5. Curhan, MD, ScD, Gary, Fooling the Parathyroid Gland-Will There Be Health Benefits? Editorial, The New England Journal of Medicine, April 8, 2004: 1565-1567.</p> <p>6. Isselbacher, et.al., Principles of Internal Medicine (Harrison's Vol. 2), Chapter 357, Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders, 13th Edition, McGraw-Hill, Inc.:2160-2161.</p> <p>7. Tietz, Ph.D., Norbert W., Textbook of Clinical Chemistry, Chapter 21, Calcium and Phosphate Metabolism, 3rd Edition, W. B Saunders Company, 1986: 705-716.</p>
252.01	Primary hyperparathyroidism	References for Hypercalcemia: Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
252.02	Secondary hyperparathyroidism, non-renal	Holick, MF. Vitamin D deficiency. N Engl J Med 2007; 357:266.
252.08	Other hyperparathyroidism	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
252.1	Hypoparathyroidism	<p>1. Goltzman, D, Cole, DEC. Hypoparathyroidism. In Primer on the Metabolic Bone Diseases and Disorders of Bone Metabolism, American Society of Bone and Mineral Research 2006; 6:216.;</p> <p>2. Fitzpatrick, LA, Arnold, A. Hypoparathyroidism. In: Endocrinology, 3rd ed, DeGroot, LJ, (Ed), Saunders, Philadelphia 1995 p.1123.</p>
252.8	Other specified disorders of parathyroid gland	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
252.9	Unspecified disorder of parathyroid gland	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
255.2	Adrenogenital disorders	UpToDate® Causes of vitamin D deficiency and resistance
256.2	Postablative ovarian failure	The Journal of Clinical Endocrinology & Metabolism, Vitamin D Insufficiency and Hyperparathyroidism in a Low Income, Multiracial, Elderly Population* Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation
256.31	Premature menopause	See 256.2
256.39	Other ovarian failure	See 256.2

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257.1	Postablative testicular hypofunction	The Journal of Clinical Endocrinology & Metabolism, Vitamin D Insufficiency and Hyperparathyroidism in a Low Income, Multiracial, Elderly Population* Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation
257.2	Other testicular hypofunction	See 257.1
257.8	Other testicular dysfunction	See 257.1
257.9	Unspecified testicular dysfunction	See 257.1
258.01	Multiple endocrine neoplasia [MEN] type I	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.
259.50	Androgen insensitivity, unspecified	The Journal of Clinical Endocrinology & Metabolism, Vitamin D Insufficiency and Hyperparathyroidism in a Low Income, Multiracial, Elderly Population* Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation
259.51	Androgen insensitivity syndrome	See 259.50
259.52	Partial androgen insensitivity	See 259.50
268.0	Rickets, active	In proposed policy
268.1	Rickets, late effect	In proposed policy
268.2	Osteomalacia, unspecified	In proposed policy
268.9	Unspecified Vitamin D deficiency	UpToDate® Causes of vitamin D deficiency and resistance References: 1. Tsai, KS, Wahner, HW, Offord, KP, et al. Effect of aging on vitamin D stores and bone density in women. Calcif Tissue Int 1987; 40:241. 2. Webb, AR, Kline, L, Holick, MF. Influence of season and latitude on the cutaneous synthesis of vitamin D3: Exposure to winter sunlight in Boston and Edmonton will not promote vitamin D3 synthesis in human skin. J Clin Endocrinol Metab 1988; 67:373. 3. MacLaughlin, J, Holick, MF. Aging decreases the capacity of human skin to produce vitamin D3. J Clin Invest 1985 4. 76:1536.;Harris, SS, Soteriades, E, Coolidge, JA, et al. Vitamin D insufficiency and hyperparathyroidism in a low income, multiracial, elderly population. J Clin Endocrinol Metab 2000

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268.9	Unspecified vitamin D deficiency	<p>Additional References:</p> <p>5. 85:4125.;Passeri, G, Pini, G, Troiano, L, et al. Low vitamin D status, high bone turnover, and bone fractures in centenarians. J Clin Endocrinol Metab 2003; 88:5109.</p> <p>6. Gloth, FM, Gundberg CM, Hollis BW, et al. Vitamin D deficiency in homebound elderly persons. JAMA 1995; 274:1683.</p> <p>7. Lawson, M, Thomas, M. Vitamin D concentrations in Asian children aged 2 years living in England:Population survey. BMJ 1999</p> <p>8. 318:28;Tangpricha, V, Pearce, EN, Chen, TC, Holick, MF. Vitamin D insufficiency among free-living healthy young adults. Am J Med 2002; 112:659</p> <p>9. Thomas, MK, Lloyd-Jones, DM, Thadhani, RI, et al. Hypovitaminosis D in medical inpatients. N Engl J Med 1998; 338:777.</p>
268.9	Unspecified vitamin D deficiency	<p>10. Stone, MD, William J. and Rabin, MD, Pauline L., End-Stage Renal Disease, An Integrated Approach, Renal Physiology and Pathophysiology of Renal Failure, Academic Press, 1983: 2-25.</p> <p>11. Block, MD, Geoffrey, et.al., Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, The New England Journal of Medicine, April 8, 2004:1516-1525.</p> <p>12. Curhan, MD, ScD, Gary, Fooling the Parathyroid Gland-Will There Be Health Benefits? Editorial, The New England Journal of Medicine, April 8, 2004: 1565-1567.</p> <p>13. Isselbacher, et.al., Principles of Internal Medicine (Harrison's Vol. 2), Chapter 357, Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders, 13th Edition, McGraw-Hill, Inc.:2160-2161.</p> <p>14. Tietz, Ph.D., Norbert W., Textbook of Clinical Chemistry, Chapter 21, Calcium and Phosphate Metabolism, 3rd Edition, W. B Saunders Company, 1986: 705-716.</p>
269.8	Other nutritional deficiency	See 268.9
269.9	Unspecified nutritional deficiency	See 268.9

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272	Pure hypercholesterolemia	1. Thomas J. Wang, Michael J. Pencina, Sarah L. Booth, Paul F. Jacques, Erik Ingelson, Katherine Lanier, Emelia J. Benjamin, Ralph B. D'Agostino, Myles Wolf, Ramachandran S Vasam. "Vitamin D Deficiency and Risk of Cardiovascular Disease" Circulation 117: 503 – 511 (2008). 2. Edward Giovannucci, Yan Liu, Bruce W. Hollis, Eric B. Rimm "A Prospective Study of 25-hydroxyvitamin D and Risk of Myocardial Infarction in Men" Arch Intern Med 168: 1174 – 1180 (2008). 3. Frank A Blocki. "The Predictive Value of Vitamin D Status for Deaths Due to Heart Failure, Sudden Cardiac Death and Stroke" Clinical Diagnostic News 3: 4-5 (November 2008) 4. Pilz S, Marz W, Wellnitz B, Seelhorst U, Fahrleitner-Pammer A, Dimai HP, Boehm BO, Dobnig H. "Association of Vit D deficiency with heart failure and sudden cardiac death in a large cross-sectional study of patients referred for coronary angiography" J Clin Endocrin Metab vol 93: 392
272	Pure hypercholesterolemia	5. Pilz, Stefan MD; Dobnig, Harald MD; Fischer, Joachim E. MD; Wellnitz, Britta LLD; Seelhorst, Ursula MA; Boehm, Bernhard O. MD; März, Winfried MD. "Low Vitamin D Levels Predict Stroke in Patients Referred to Coronary Angiography" Stroke Volume 39 (9) September: pp 2611-2613 (2008). 6. Harald Dobnig, Stefan Pilz, Hubert Scharnagl, Wilfried Renner, Ursula Seelhorst, Britta Wellnitz, Jürgen Kinkeldei, Bernhard O. Boehm, Gisela Weihrauch, Winfried Maerz "Independent Association of Low Serum 25-Hydroxyvitamin D and 1,25-Dihydroxyvitamin D Levels With All-Cause and Cardiovascular Mortality" Arch Intern Med 168(12):1340-1349 (2008).
272	Pure hypercholesterolemia	7. John J. Cannell, Reinhold Vieth, Walter Willett, Michael Zasloff, John N. Hathcock, John H. White, Sherry A. Tanumihardjo, D. Enette Larson-Meyer, Heike A. Bischoff-Ferrari, Christel J. Lamberg-Allardt, Joan M. Lappe, Anthony W. Norman, Armin Zittermann, Susan J. Whiting, William B. Grant, Bruce W. Hollis, Edward Giovannucci. "Cod Liver Oil, Vitamin A Toxicity, Frequent Respiratory Infections, and the Vitamin D Deficiency Epidemic" Annals of Otolaryngology & Laryngology 117(11): 864 – 870 (2008). 8. John J. Cannell, Bruce W. Hollis. "Use of Vitamin D in Clinical Practice" Alternative Medicine Review Vol. 13, No. 1: 6-20 (2008).
272.1	Pure hyperglyceridemia	See 272.00
272.2	Mixed hyperlipidemia	See 272.00
272.4	Other and unspecified hyperlipidemia	See 272.00
275.3	Disorders of phosphorus metabolism	In proposed policy
275.40	Unspecified disorder of calcium metabolism	Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51.

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275.41	Hypocalcemia	1. Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51. 2. Holick, MF. Vitamin D deficiency. N Engl J Med 2007; 357:266.
275.42	Hypercalcemia	In proposed policy
275.49	Other disorders of calcium metabolism	UpToDate® Causes of vitamin D deficiency and resistance
277.00	Cystic fibrosis without mention of meconium ileus	UpToDate® Causes of vitamin D deficiency and resistance - Reference: Donovan, DS, Papadopoulos, A, Staron, RB, et al. Bone mass and vitamin D deficiency in adults with advanced cystic fibrosis lung disease. Am J Respir Crit Care Med 1998; 157:1892.
277.01	Cystic fibrosis with meconium ileus	See 277.00
277.02	Cystic fibrosis with pulmonary manifestations	See 277.00
277.03	Cystic fibrosis with gastrointestinal manifestations	See 277.00
277.09	Cystic fibrosis with other manifestations	See 277.00
278.4	Hypervitaminosis D	1. Lafferty, FW. Differential diagnosis of hypercalcemia. J Bone Miner Res 1991; 6 Suppl 2:S51. 2. Kimball, S, Vieth, R. Self-prescribed high-dose vitamin D3: effects on biochemical parameters in two men. Ann Clin Biochem 2008; 45:106. 3. Jacobus, CH, Holick, MF, Shao, Q, et al. Hypervitaminosis D associated with drinking milk. N Engl J Med 1992; 326:1173.
345.00	Generalized nonconvulsive epilepsy, without mention of intractable epilepsy	UpToDate® Causes of vitamin D deficiency and resistance Reference. 1. Hahn, TJ. Drug-induced disorders of vitamin D and mineral metabolism. Clin Endocrinol Metab 1980; 9:107.; 2. Sotaniemi, EA, Hakkarainen, HK, Puranen, JA, Lahti, RO. Radiologic bone changes and hypocalcemia with anticonvulsant therapy in epilepsy. Ann Intern Med 1972; 77:389; 3. Välimäki, MJ, Tiihonen, M, Laitinen, K, et al. Bone mineral density measured by dual-energy X-ray absorptiometry and novel markers of bone formation and resorption in patients on antiepileptic drugs. J Bone Miner Res 1994; 9:631.; 4. Collins, N, Maher, J, Cole, M, et al. A prospective study to evaluate the dose of vitamin D required to correct low 25-hydroxyvitamin D levels, calcium, and alkaline phosphatase in patients at risk of developing antiepileptic drug-induced osteomalacia. Q J Med 1991; 78:113.
345.01	Generalized nonconvulsive epilepsy, with intractable epilepsy	See 345.00
345.10	Generalized convulsive epilepsy, without mention of intractable epilepsy	See 345.00
345.11	Generalized convulsive epilepsy, with intractable epilepsy	See 345.00
345.2	Petit mal status, epileptic	See 345.00
345.3	Grand mal status, epileptic	See 345.00

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345.40	Localization-related (focal) (partial) epilepsy and epileptic syndromes, with complex partial seizures, without mention of intractable epilepsy	See 345.00
345.41	Localization-related (focal) (partial) epilepsy and epileptic syndromes, with complex partial seizures, with intractable epilepsy	See 345.00
345.50	Localization-related (focal) (partial) epilepsy and epileptic syndromes, with simple partial seizures, without mention of intractable epilepsy	See 345.00
345.51	Localization-related (focal) (partial) epilepsy and epileptic syndromes, with simple partial seizures, with intractable epilepsy	See 345.00
345.80	Other forms of epilepsy and recurrent seizures, without mention of intractable epilepsy	See 345.00
345.81	Other forms of epilepsy and recurrent seizures, with intractable epilepsy	See 345.00
345.90	Epilepsy, unspecified, without mention of intractable epilepsy	See 345.00
345.91	Epilepsy, unspecified, with intractable epilepsy	See 345.00
401.0	Malignant essential hypertension	1. David Martins, Myeles Wolf, Deyu Pan, Ashraf Zadshir, Naureen Tareen, Ravi Thadani, Arnold Felsenfeld, Barton Levine, Rajnish Mehotra, Keith Norris "Prevalence of Cardiovascular Risk Factors and the Serum Levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey" <i>Arch Intern Med</i> 167: 1159 – 1165 (2007). 2. John H. Lee, James H. O'Keefe, David Bell, Donald D. Hensrud, Michael F. Holck. "Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor?" <i>Journal of the American College of Cardiology</i> 52 (24): 1949 – 1956 (2008).
401.1	Benign essential hypertension	See 401.0
401.9	Unspecified essential hypertension	See 401.0
402.00	Hypertensive heart disease, malignant, without heart failure	1. David Martins, Myeles Wolf, Deyu Pan, Ashraf Zadshir, Naureen Tareen, Ravi Thadani, Arnold Felsenfeld, Barton Levine, Rajnish Mehotra, Keith Norris "Prevalence of Cardiovascular Risk Factors and the Serum Levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey" <i>Arch Intern Med</i> 167: 1159 – 1165 (2007). 2. John H. Lee, James H. O'Keefe, David Bell, Donald D. Hensrud, Michael F. Holck. "Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor?" <i>Journal of the American College of Cardiology</i> 52 (24): 1949 – 1956 (2008).
402.01	Hypertensive heart disease, malignant, with heart failure	See 402.00
402.10	Hypertensive heart disease, benign, without heart failure	See 402.00
402.11	Hypertensive heart disease, benign, with heart failure	See 402.00

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402.90	Hypertensive heart disease, unspecified, without heart failure	See 402.00
402.91	Hypertensive heart disease, unspecified, with heart failure	See 402.00
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	1. David Martins, Myeles Wolf, Deyu Pan, Ashraf Zadshir, Naureen Tareen, Ravi Thadani, Arnold Felsenfeld, Barton Levine, Rajnish Mehotra, Keith Norris "Prevalence of Cardiovascular Risk Factors and the Serum Levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey" <i>Arch Intern Med</i> 167: 1159 – 1165 (2007). 2. John H. Lee, James H. O'Keefe, David Bell, Donald D. Hensrud, Michael F. Holck. "Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor?" <i>Journal of the American College of Cardiology</i> 52 (24): 1949 – 1956 (2008).
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	See 403.00
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	See 403.00
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	See 403.00
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	See 403.00
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	See 403.00
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	1. David Martins, Myeles Wolf, Deyu Pan, Ashraf Zadshir, Naureen Tareen, Ravi Thadani, Arnold Felsenfeld, Barton Levine, Rajnish Mehotra, Keith Norris "Prevalence of Cardiovascular Risk Factors and the Serum Levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey" <i>Arch Intern Med</i> 167: 1159 – 1165 (2007). 2. John H. Lee, James H. O'Keefe, David Bell, Donald D. Hensrud, Michael F. Holck. "Vitamin D Deficiency: An Important, Common, and Easily Treatable Cardiovascular Risk Factor?" <i>Journal of the American College of Cardiology</i> 52 (24): 1949 – 1956 (2008).
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	See 404.00
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	See 404.00
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	See 404.00

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404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	See 404.00
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	See 404.00
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	See 404.00
404.13	Hypertensive heart and chronic kidney disease, benign with heart failure and chronic kidney disease stage V or end stage renal disease	See 404.00
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	See 404.00
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	See 404.00
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	See 404.00
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	See 404.00

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411.1	Intermediate coronary syndrome	<p>1. Thomas J. Wang, Michael J. Pencina, Sarah L. Booth, Paul F. Jacques, Erik Ingelson, Katherine Lanier, Emelia J. Benjamin, Ralph B. D'Agostino, Myles Wolf, Ramachandran S Vasam. "Vitamin D Deficiency and Risk of Cardiovascular Disease" Circulation 117: 503 – 511 (2008).</p> <p>2. Edward Giovannucci, Yan Liu, Bruce W. Hollis, Eric B. Rimm "A Prospective Study of 25-hydroxyvitamin D and Risk of Myocardial Infarction in Men" Arch Intern Med 168: 1174 – 1180 (2008).</p> <p>3. Frank A Blocki. "The Predictive Value of Vitamin D Status for Deaths Due to Heart Failure, Sudden Cardiac Death and Stroke" Clinical Diagnostic News 3: 4-5 (November 2008).</p> <p>4. Pilz S, März W, Wellnitz B, Seelhorst U, Fahrleitner-Pammer A, Dimai HP, Boehm BO, Dobnig H. "Association of Vit D deficiency with heart failure and sudden cardiac death in a large</p>
411.1	Intermediate coronary syndrome	<p>Additional References:</p> <p>5. Pilz, Stefan MD; Dobnig, Harald MD; Fischer, Joachim E. MD; Wellnitz, Britta LLD; Seelhorst, Ursula MA; Boehm, Bernhard O. MD; März, Winfried MD. "Low Vitamin D Levels Predict Stroke in Patients Referred to Coronary Angiography" Stroke Volume 39 (9) September: pp 2611-2613 (2008).</p> <p>6. Harald Dobnig, Stefan Pilz, Hubert Scharnagl, Wilfried Renner, Ursula Seelhorst, Britta Wellnitz, Jürgen Kinkeldei, Bernhard O. Boehm, Gisela Weihrauch, Winfried Maerz. "Independent Association of Low Serum 25-Hydroxyvitamin D and 1,25-Dihydroxyvitamin D Levels With All-Cause and Cardiovascular Mortality" Arch Intern Med 168(12):1340-1349 (2008).</p> <p>7. John J. Cannell, Reinhold Vieth, Walter Willett, Michael Zasloff, John N. Hathcock, John H. White, Sherry A. Tanumihardjo, D. Enette Larson-Meyer, Heike A. Bischoff-Ferrari, Christel J. L</p> <p>8. John J. Cannell, Bruce W. Hollis. "Use of Vitamin D in Clinical Practice" Alternative Medicine</p>
414.00	Coronary atherosclerosis of unspecified type of vessel, native or graft	See 411.1
414.01	Coronary atherosclerosis of native coronary artery	See 411.1
428.0	Congestive heart failure, unspecified	See 411.1
428.1	Left heart failure	See 428.0
428.20	Unspecified systolic heart failure	See 428.0
428.21	Acute systolic heart failure	See 428.0
428.22	Chronic systolic heart failure	See 428.0
428.23	Acute on chronic systolic heart failure	See 428.0

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428.30	Unspecified diastolic heart failure	See 428.0
428.31	Acute diastolic heart failure	See 428.0
428.32	Chronic diastolic heart failure	See 428.0
428.33	Acute on chronic diastolic heart failure	See 428.0
428.40	Unspecified combined systolic and diastolic heart failure	See 428.0
428.41	Acute combined systolic and diastolic heart failure	See 428.0
428.42	Chronic combined systolic and diastolic heart failure	See 428.0
428.43	Acute on chronic combined systolic and diastolic heart failure	See 428.0
428.9	Heart failure, unspecified	See 428.0
		UpToDate® Causes of vitamin D deficiency and resistance- Reference: Fortenbery, EJ, McDermott, MT, Duncan, WE. Effect of theophylline on calcium metabolism and circulating vitamin D metabolites. J Bone Miner Res 1990; 5:321.
493.00	Extrinsic asthma, unspecified	
493.01	Extrinsic asthma with status asthmaticus	See 493.00
493.02	Extrinsic asthma with (acute) exacerbation	See 493.00
493.10	Intrinsic asthma, unspecified	See 493.00
493.11	Intrinsic asthma with status asthmaticus	See 493.00
493.12	Intrinsic asthma with (acute) exacerbation	See 493.00
493.20	Chronic obstructive asthma, unspecified	See 493.00
493.21	Chronic obstructive asthma, with status asthmaticus	See 493.00
493.22	Chronic obstructive asthma, with (acute) exacerbation	See 493.00
493.81	Exercise induced bronchospasm	See 493.00
493.82	Cough variant asthma	See 493.00
493.90	Asthma, unspecified type, unspecified	See 493.00
493.91	Asthma, unspecified type, with status asthmaticus	See 493.00
493.92	Asthma, unspecified type, with (acute) exacerbation	See 493.00
		UpToDate® Causes of vitamin D deficiency and resistance Reference #'s 1. Compston, JE. Hepatic osteodystrophy: Vitamin D metabolism in patients with liver disease. Gut1986; 27:1073. 2. Dibble, JB, Sheridan, P, Losowsky, MS. A survey of vitamin D deficiency in gastrointestinal and liver disorders. Q J Med 1984; 53:119. 3. Kumar, R. Hepatic and intestinal osteodystrophy and the hepatobiliary metabolism of vitamin D. Ann Intern Med 1983; 98:662. 4. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795.
571.40	Chronic hepatitis, unspecified	
571.41	Chronic persistent hepatitis	See 571.40
571.49	Other chronic hepatitis	See 571.40

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571.5	Cirrhosis of liver without mention of alcohol	See 571.40
571.6	Biliary cirrhosis	See 571.40
571.8	Other chronic nonalcoholic liver disease	See 571.40
576.2	Obstruction of bile duct	See 571.40
579.0	Celiac disease	<p>Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation UpToDate® Causes of vitamin D deficiency and resistance - Reference: 1. Shaker, JL, Brickner, RC, Findling, JW, et al. Hypocalcemia and skeletal disease as presenting features of celiac disease. Arch Intern Med 1997; 157:1013. 2. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795.</p>
579.1	Tropical sprue	See 579.0
579.2	Blind loop syndrome	<p>Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation UpToDate® Causes of vitamin D deficiency and resistance - Reference Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795.</p>
579.3	Other and unspecified postsurgical nonabsorption	<p>Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation UpToDate® Causes of vitamin D deficiency and resistance - Reference 1. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795. 2. American Gastroenterological Association medical position statement: guidelines on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:791.</p>
579.4	Pancreatic steatorrhea	<p>Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation UpToDate® Causes of vitamin D deficiency and resistance - Reference 1. Johnson, JM, Maher, JW, Demaria, EJ, et al. The Long-term Effects of Gastric Bypass on Vitamin D Metabolism. Ann Surg 2006; 243:701. 2. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795. 3. American Gastroenterological Association medical position statement: guidelines on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:791.</p>

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579.8	Other specified intestinal malabsorption	<p>Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation</p> <p>UpToDate® Causes of vitamin D deficiency and resistance - Reference</p> <p>1. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795.</p> <p>2. American Gastroenterological Association medical position statement: guidelines on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:791.</p>
581.0	Nephrotic syndrome with lesion of proliferative glomerulonephritis	<p>UpToDate® Causes of vitamin D deficiency and resistance - Reference:</p> <p>Goldstein, DA, Haldimann, B, Sherman, D, et al. Vitamin D metabolites and calcium metabolism in patients with nephrotic syndrome and normal renal function. J Clin Endocrinol Metab 1981; 52:116.</p>
581.1	Nephrotic syndrome with lesion of membranous glomerulonephritis	See 581.0
581.2	Nephrotic syndrome with lesion of membranoproliferative glomerulonephritis	See 581.0
581.3	Nephrotic syndrome with lesion of minimal change glomerulonephritis	See 581.0
581.81	Nephrotic syndrome in diseases classified elsewhere	See 581.0
581.89	Nephrotic syndrome with other specified pathological lesion in kidney	See 581.0
581.9	Nephrotic syndrome with unspecified pathological lesion in kidney	See 581.0
583.2	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranoproliferative glomerulonephritis	<p>1. <i>Kidney Int.</i> 72(8):1004-1013(2007), "Vitamin D levels and early mortality among incident hemodialysis patients"</p>
583.2	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranoproliferative glomerulonephritis	<p>2. Stone, MD, William J. and Rabin, MD, Pauline L., End-Stage Renal Disease, An Integrated Approach, Renal Physiology and Pathophysiology of Renal Failure, Academic Press, 1983: 2-25.</p> <p>3. Block, MD, Geoffrey, et.al., Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, The New England Journal of Medicine, April 8, 2004:1516-1525.</p> <p>4. Curhan, MD, ScD, Gary, Fooling the Parathyroid Gland-Will There Be Health Benefits? Editorial, The New England Journal of Medicine, April 8, 2004: 1565-1567.</p> <p>5. Isselbacher, et.al., Principles of Internal Medicine (Harrison's Vol. 2), Chapter 357, Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders, 13th Edition, McGraw-Hill, Inc.:2160-2161.</p> <p>6. Tietz, Ph.D., Norbert W., Textbook of Clinical Chemistry, Chapter 21, Calcium and Phosphate Metabolism, 3rd Edition, W. B Saunders Company, 1986: 705-716.</p>
585.1	Chronic kidney disease, Stage I	In proposed policy
585.2	Chronic kidney disease, Stage II (mild)	In proposed policy
585.3	Chronic kidney disease, Stage III (moderate)	In proposed policy

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585.4	Chronic kidney disease, Stage IV (severe)	In proposed policy
585.5	Chronic kidney disease, Stage V	In proposed policy
585.6	End stage renal disease	In proposed policy
586	Renal failure, unspecified	In proposed policy
588.81	Secondary hyperparathyroidism, (of renal origin)	1. <i>Am. J. Kidney Dis.</i> 50(1):59-68(2007) "Changes in serum 25-hydroxyvitamin D and plasma intact PTH levels following treatment with ergocalciferol in patients with CKD", Al Aly, Z, et al. 2. <i>Am. J. Med.</i> 107(6):561-567(1999), "The effects of vitamin D insufficiency in patients with primary hyperparathyroidism", Silverberg, S.J., et al. 3. <i>Bone</i> , (2008), "Serum 25-hydroxyvitamin D as an independent determinant of 1-84 PTH and bone mineral density in non-diabetic predialysis CKD patients", Tomida, K., et al.
588.81	Secondary hyperparathyroidism, (of renal origin)	4. Stone, MD, William J. and Rabin, MD, Pauline L., End-Stage Renal Disease, An Integrated Approach, Renal Physiology and Pathophysiology of Renal Failure, Academic Press, 1983: 2-25. 5. Block, MD, Geoffrey, et al., Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, <i>The New England Journal of Medicine</i> , April 8, 2004:1516-1525. 6. Curhan, MD, ScD, Gary, Fooling the Parathyroid Gland-Will There Be Health Benefits? Editorial, <i>The New England Journal of Medicine</i> , April 8, 2004: 1565-1567. 7. Isselbacher, et al., Principles of Internal Medicine (Harrison's Vol. 2), Chapter 357, Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders, 13th Edition, McGraw-Hill, Inc.:2160-2161. 8. Tietz, Ph.D., Norbert W., Textbook of Clinical Chemistry, Chapter 21, Calcium and Phosphate Metabolism, 3rd Edition, W. B Saunders Company, 1986: 705-716.
588.89	Other specified disorders resulting from impaired renal function	See 588.81
701.8	Other specified hypertrophic and atrophic conditions of skin	Aging Decreases the Capacity of Human Skin to Produce Vitamin D3, Julia MacLaughlin and Michael F. Holick - UpToDate® Causes of vitamin D deficiency and resistance - References: 1. Webb, AR, Kline, L, Holick, MF. Influence of season and latitude on the cutaneous synthesis of vitamin D3: Exposure to winter sunlight in Boston and Edmonton will not promote vitamin D3 synthesis in human skin. <i>J Clin Endocrinol Metab</i> 1988; 67:373. 2. MacLaughlin, J, Holick, MF. Aging decreases the capacity of human skin to produce vitamin D3. <i>J Clin Invest</i> 1985; 76:1536. 3. Gloth, FM, Gundberg CM, Hollis BW, et al. Vitamin D deficiency in homebound elderly persons. <i>JAMA</i> 1995; 274:1683.

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728.2	Muscular wasting and disuse atrophy, not elsewhere classified	Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation - UpToDate® Causes of vitamin D deficiency and resistance - Reference: Plotnikoff, GA, Quigley, JM. Prevalence of severe hypovitaminosis D in patients with persistent, nonspecific musculoskeletal pain. Mayo Clin Proc 2003; 78:1463.
728.3	Other specific muscle disorders	See 728.2
728.87	Muscle weakness (generalized)	1. Presse Med. 38 (1):43-54 (2009) "Vitamin D: skeletal and extra skeletal effects; recommendations for good practice", Briot, K, et.al 2. Nat. Clin. Pract. Rheumatol 4(11):580-588(2008), "Vitamin D and musculoskeletal health", Wolff, A, E., A N Jones, and K.E. Hansen
729.1	Myalgia and myositis, unspecified	Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation - UpToDate® Causes of vitamin D deficiency and resistance - Reference: Plotnikoff, GA, Quigley, JM. Prevalence of severe hypovitaminosis D in patients with persistent, nonspecific musculoskeletal pain. Mayo Clin Proc 2003; 78:1463.
733.00	Osteoporosis, unspecified	The Journal of Clinical Endocrinology & Metabolism, Vitamin D Insufficiency and Hyperparathyroidism in a Low Income, Multiracial, Elderly Population* Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation
733.01	Senile osteoporosis	See 733.00
733.02	Idiopathic osteoporosis	See 733.00
733.03	Disuse osteoporosis	See 733.00
733.09	Other osteoporosis	See 733.00
733.10	Pathologic fracture, unspecified site	The Journal of Clinical Endocrinology & Metabolism 88(11):5109–5115, Low Vitamin D Status, High Bone Turnover, and Bone Fractures in Centenarians
733.11	Pathologic fracture of humerus	See 733.10
733.12	Pathologic fracture of distal radius and ulna	See 733.10
733.13	Pathologic fracture of vertebrae	See 733.10
733.14	Pathologic fracture of neck of femur	See 733.10
733.15	Pathologic fracture of other specified part of femur	See 733.10
733.16	Pathologic fracture of tibia and fibula	See 733.10
733.19	Pathologic fracture of other specified site	See 733.10
733.90	Disorder of bone and cartilage, unspecified	1. Presse Med. 38 (1):43-54 (2009) "Vitamin D: skeletal and extra skeletal effects; recommendations for good practice", Briot, K, et.al 2. Nat. Clin. Pract. Rheumatol 4(11):580-588(2008), "Vitamin D and musculoskeletal health", Wolff, A, E., A N Jones, and K.E. Hansen

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733.9	Disorder of bone and cartilage, unspecified	<p>3. Stone, MD, William J. and Rabin, MD, Pauline L., End-Stage Renal Disease, An Integrated Approach, Renal Physiology and Pathophysiology of Renal Failure, Academic Press, 1983: 2-25.</p> <p>4. Block, MD, Geoffrey, et.al., Cinacalcet for Secondary Hyperparathyroidism in Patients Receiving Hemodialysis, The New England Journal of Medicine, April 8, 2004:1516-1525.</p> <p>5. Curhan, MD, ScD, Gary, Fooling the Parathyroid Gland-Will There Be Health Benefits? Editorial, The New England Journal of Medicine, April 8, 2004: 1565-1567.</p> <p>6. Isselbacher, et.al., Principles of Internal Medicine (Harrison's Vol. 2), Chapter 357, Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders, 13th Edition, McGraw-Hill, Inc.:2160-2161.</p> <p>7. Tietz, Ph.D., Norbert W., Textbook of Clinical Chemistry, Chapter 21, Calcium and Phosphate Metabolism, 3rd Edition, W. B Saunders Company, 1986: 705-716.</p> <p>8. Bischoff-Ferrari H, Giovannucci E, Willett W, Dietrich T, Dawson-Hughes B. Estimation of optimal serum concentrations of 25-hydroxyvitamin D for multiple health outcomes. Am J Clin Nutr 2006; 84:18-28</p>
786.00	Respiratory abnormality, unspecified	<p>1. Roland R.J. van Kimmenade, MDa, Yigal M. Pinto, MD, PhDa, Antoni Bayes-Genis, MD, PhDb, John G. Lainchbury, MDc, A. Mark Richards, MD, PhDc, and James L. Januzzi, Jr., MDd. Usefulness of Intermediate Amino-Terminal Pro-Brain Natriuretic Peptide Concentrations for Diagnosis and Prognosis of Acute Heart Failure. Am J Cardiol, 2006;98:386 –390</p> <p>2. R. van Kimmenade, J. Januzzi, Jr, P. Ellinor, U. Sharma, J. Bakker, A. Low, A. Martinez, H. Crijns, C. MacRae, P. Menheere. Utility of Amino-Terminal Pro-Brain Natriuretic Peptide, Galectin-3, and Apelin for the Evaluation of Patients With Acute Heart Failure. Journal of the American College of Cardiology, Volume 48, Issue 6, Pages 1217-1224</p> <p>3. Angela M. Morrello, James L. Jannuzzi. Amino-terminal pro-brain natriuretic peptide: a biomarker for diagnosis, prognosis and management of heart failure. Expert Rev. Mol. Diag. 6 (5); 649-662 (2006).</p>
786.01	Hyperventilation	See 786.0
786.02	Orthopnea	See 786.0
786.03	Apnea	See 786.0
786.04	Cheyne-Stokes respiration	See 786.0
786.05	Shortness of breath	See 786.0
786.06	Tachypnea	See 786.0
786.07	Wheezing	See 786.0
786.09	Other dyspnea and respiratory abnormality	See 786.0

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786.1	Stridor	See 786.0
786.2	Cough	See 786.0
786.3	Hemoptysis	See 786.0
786.4	Abnormal sputum	See 786.0
786.50	Unspecified chest pain	See 786.0
786.51	Precordial pain	See 786.0
786.52	Painful respiration	See 786.0
786.59	Other chest pain	See 786.0
786.6	Swelling, mass, or lump in chest	See 786.0
786.7	Abnormal chest sounds	See 786.0
786.8	Hiccough	See 786.0
786.9	Other symptoms involving respiratory system and chest	See 786.0
948.50	Burn [any degree] involving 50-59 percent of body surface with third degree burn of less than 10 percent or unspecified amount	UpToDate® Causes of vitamin D deficiency and resistance - Reference: Klein, GL, Chen, TC, Holick, MF, et al. Synthesis of vitamin D in skin after burns. Lancet 2004; 363:291.
948.51	Burn [any degree] involving 50-59 percent of body surface with third degree burn of 10-19%	See 948.50
948.52	Burn [any degree] involving 50-59 percent of body surface with third degree burn of 20-29%	See 948.50
948.53	Burn [any degree] involving 50-59 percent of body surface with third degree burn of 30-39%	See 948.50
948.54	Burn [any degree] involving 50-59 percent of body surface with third degree burn of 40-49%	See 948.50
948.55	Burn [any degree] involving 50-59 percent of body surface with third degree burn of 50-59%	See 948.50
948.60	Burn [any degree] involving 60-69 percent of body surface with third degree burn of less than 10 percent or unspecified amount	See 948.50
948.61	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 10-19%	See 948.50
948.62	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 20-29%	See 948.50
948.63	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 30-39%	See 948.50
948.64	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 40-49%	See 948.50

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948.65	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 50-59%	See 948.50
948.66	Burn [any degree] involving 60-69 percent of body surface with third degree burn of 60-69%	See 948.50
Need to Add	Vitamint D resistance	125 and 25 -- up to date ref 38-47 & 50
V15.88	History of fall	osteoporosis - NOF
		Clinician's Guide to Prevention and Treatment of Osteoporosis, National Osteoporosis Foundation UpToDate® Causes of vitamin D deficiency and resistance- Reference: 1. Johnson, JM, Maher, JW, Demaria, EJ, et al. The Long-term Effects of Gastric Bypass on Vitamin D Metabolism. Ann Surg 2006; 243:701. 2. Bernstein, CN, Leslie, WD, Leboff, MS. AGA technical review on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:795. 3. American Gastroenterological Association medical position statement: guidelines on osteoporosis in gastrointestinal diseases. Gastroenterology 2003; 124:791.
V45.75	Acquired absence of stomach	
V45.86	Bariatric surgery status	See V45.75
		The Journal of Clinical Endocrinology & Metabolism 90(6):3215–3224, Prevalence of Vitamin D Inadequacy among Postmenopausal North American Women Receiving Osteoporosis Therapy - UpToDate® Causes of vitamin D deficiency and resistance - Reference: 1. Hahn, TJ. Drug-induced disorders of vitamin D and mineral metabolism. Clin Endocrinol Metab 1980; 9:107. 2. Sotaniemi, EA, Hakkarainen, HK, Puranen, JA, Lahti, RO. Radiologic bone changes and hypocalcemia with anticonvulsant therapy in epilepsy. Ann Intern Med 1972; 77:389. 3. Välimäki, MJ, Tiihonen, M, Laitinen, K, et al. Bone mineral density measured by dual-energy X-ray absorptiometry and novel markers of bone formation and resorption in patients on antiepileptic drugs. J Bone Miner Res 1994; 9:631. 4. Kovacs, CS, Jones, G, Yendt, ER. Primary hyperparathyroidism masked by antituberculous therapy-induced vitamin D deficiency. Clin Endocrinol (Oxf) 1994; 41:831. 5. Fortenbery, EJ, McDermott, MT, Duncan, WE. Effect of theophylline on calcium metabolism and circulating vitamin D metabolites. J Bone Miner Res 1990; 5:321. 6. Collins, N, Maher, J, Cole, M, et al. A prospective study to evaluate the dose of vitamin D re
V58.69	Encounter for long-term (current) use of other medications	
V81.2	Cardiovascular Risk Assessment	Dobnig H, et al. Independent association of low serum 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D levels with all-cause and cardiovascular mortality. Arch Intern Med 2008;168:1340

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	Cancer related hypercalcemia	<ol style="list-style-type: none">1. Burtis, WJ, Wu, TL, Insogna, KL, Stewart, AF. Humoral hypercalcemia of malignancy. Ann Intern Med 1988; 108:454.2. Rosol, TJ, Capen, CC. Mechanisms of cancer-induced hypercalcemia. Lab Invest 1992; 67:680.3. Schilling, T, Pecherstorfer, M, Blind, E, et al. Parathyroid hormone-related protein (PTH-rP) does not regulate serum 1,25-dihydroxyvitamin D levels in hypercalcemia of malignancy. J Clin Endocrinol Metab 1993; 76:801.4. Kimball, S, Vieth, R. Self-prescribed high-dose vitamin D3: effects on biochemical parameters in two men. Ann Clin Biochem 2008; 45:106.5. Jacobus, CH, Holick, MF, Shao, Q, et al. Hypervitaminosis D associated with drinking milk. N Engl J Med 1992; 326:1173.
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