

The following content was supplied by the authors as supporting material and has not been copy-edited or verified by JBJS.

### Appendix A: PearlDiver Codes

**Table A.1:** Codes used to define inclusion & exclusion criteria

Criteria	Code(s)
<b>Fragility Fractures</b>	
Hip	ICD-9-D-82000:ICD-9-D-82009, ICD-9-D-82020:ICD-9-D-82022, ICD-9-D-8208, ICD-9-D-73314, ICD-10-D-S72019A, ICD-10-D-S72023A, ICD-10-D-S72033A, ICD-10-D-S72043A, ICD-10-D-S72099A, ICD-10-D-S72109A, ICD-10-D-S72143A, ICD-10-D-S7223XA, ICD-10-D-M84459A, ICD-10-D-S72001A, ICD-10-D-S72002A, ICD-10-D-S72009A, ICD-10-D-S72011A, ICD-10-D-S72012A, ICD-10-D-S72031A, ICD-10-D-S72032A, ICD-10-D-S72033A, ICD-10-D-S72034A, ICD-10-D-S72035A, ICD-10-D-S72036A, ICD-10-D-S72041A, ICD-10-D-S72042A, ICD-10-D-S72044A, ICD-10-D-S72045A, ICD-10-D-S72046A, ICD-10-D-S72091A, ICD-10-D-S72092A, ICD-10-D-S72099A, ICD-10-D-M80051A, ICD-10-D-M80052A, ICD-10-D-M80059A, ICD-10-D-M80851A, ICD-10-D-M80852A, ICD-10-D-M80859A, ICD-10-D-M84451A, ICD-10-D-M84452A, ICD-10-D-M84453A
Spine	ICD-9-D-80500, ICD-9-D-80501, ICD-9-D-80502, ICD-9-D-80503, ICD-9-D-80504, ICD-9-D-80505, ICD-9-D-80506, ICD-9-D-80507, ICD-9-D-8052, ICD-9-D-8054, ICD-9-D-8058, ICD-9-D-8060, ICD-9-D-80600, ICD-9-D-80601, ICD-9-D-80602, ICD-9-D-80603, ICD-9-D-80604, ICD-9-D-80605, ICD-9-D-80606, ICD-9-D-80607, ICD-9-D-80608, ICD-9-D-80609, ICD-9-D-8061, ICD-9-D-80610, ICD-9-D-80611, ICD-9-D-80612, ICD-9-D-80613, ICD-9-D-80614, ICD-9-D-80615, ICD-9-D-80616, ICD-9-D-80617, ICD-9-D-80618, ICD-9-D-80619, ICD-9-D-8062, ICD-9-D-80620, ICD-9-D-80621, ICD-9-D-80622, ICD-9-D-80623, ICD-9-D-80624, ICD-9-D-80625, ICD-9-D-80626, ICD-9-D-80627, ICD-9-D-80628, ICD-9-D-80629, ICD-9-D-8063, ICD-9-D-80630, ICD-9-D-80631, ICD-9-D-80632, ICD-9-D-80634, ICD-9-D-80635, ICD-9-D-80636, ICD-9-D-80637, ICD-9-D-80638, ICD-9-D-80639, ICD-9-D-8064, ICD-9-D-8065, ICD-9-D-8066, ICD-9-D-80660, ICD-9-D-80661, ICD-9-D-80662, ICD-9-D-80669, ICD-9-D-8067, ICD-9-D-80670, ICD-9-D-80671, ICD-9-D-80672, ICD-9-D-80679, ICD-9-D-8068, ICD-9-D-8069, ICD-9-D-73313, ICD-10-D-S129XXA, ICD-10-D-S12000A, ICD-10-D-S12001A, ICD-10-D-S12100A, ICD-10-D-S12101A, ICD-10-D-S12200A, ICD-10-D-S12201A, ICD-10-D-S12300A, ICD-10-D-S12301A, ICD-10-D-S12400A, ICD-10-D-S12401A, ICD-10-D-S12500A, ICD-10-D-S12501A, ICD-10-D-S12600A, ICD-10-D-S12601A, ICD-10-D-S22009A, ICD-10-D-S32009A, ICD-10-D-S3210XA, ICD-10-D-S322XXA, ICD-10-D-S14101A, ICD-10-D-S14102A, ICD-10-D-S14103A, ICD-10-D-S14104A, ICD-10-D-S14105A, ICD-10-D-S14106A, ICD-10-D-S14107A, ICD-10-D-S24101A, ICD-10-D-S24102A, ICD-10-D-S24151A, ICD-10-D-S24152A, ICD-10-D-S24103A, ICD-10-D-S24104A, ICD-10-D-S24153A, ICD-10-D-S24154A, ICD-10-D-S34109A, ICD-10-D-S32009A, ICD-10-D-S34101A, ICD-10-D-S34121A, ICD-10-D-S32019A, ICD-10-D-S34102A, ICD-10-D-S34122A, ICD-10-D-S32029A, ICD-10-D-S34103A, ICD-10-D-S34123A, ICD-10-D-S32039A, ICD-10-D-S34104A, ICD-10-D-S34124A, ICD-10-D-S32049A, ICD-10-D-S34105A, ICD-10-D-S34125A, ICD-10-D-S32059A, ICD-10-D-S14109A, ICD-10-D-S24109A, ICD-10-D-S34139A, ICD-10-D-M4850XA, ICD-10-D-M8008XA, ICD-10-D-M8448XA, , ICD-10-D-M8468XA, ICD-10-D-S22000A, ICD-10-D-S22010A, ICD-10-D-S22020A, ICD-10-D-S22030A, ICD-10-D-S22040A, ICD-10-D-S22050A, ICD-10-D-S22060A, ICD-10-D-S22070A, ICD-10-D-S22080A, ICD-10-D-S32000A, ICD-10-D-S32010A, ICD-10-D-S32020A, ICD-10-D-S32030A, ICD-10-D-S32040A, ICD-10-D-S32050A, ICD-10-D-S14108A, ICD-10-D-S24159A, ICD-10-D-S32018A, ICD-10-D-M4851XA, ICD-10-D-M4852XA, ICD-10-D-M4853XA, ICD-10-D-M4854XA, ICD-10-D-M4855XA, ICD-10-D-M4856XA, ICD-10-D-M4857XA, ICD-10-D-M4858XA, ICD-10-D-M8088XA
Pelvis	ICD-9-D-8080, ICD-9-D-8082, ICD-9-D-80841, ICD-9-D-80842, ICD-9-D-80849, ICD-9-D-8088, ICD-10-D-S32409A, ICD-10-D-S32501A, ICD-10-D-S32509A, ICD-10-D-S32309A, ICD-10-D-S32609A, ICD-10-D-S3282XA, ICD-10-D-S3289XA, ICD-10-D-S329XXA, ICD-10-D-S32401A, ICD-10-D-S32402A, ICD-10-D-S32502A, ICD-10-D-S32511A, ICD-10-D-S32512A, ICD-10-D-S32519A, ICD-10-D-S32591A, ICD-10-D-S32592A, ICD-10-D-S32599A, ICD-10-D-S32301A, ICD-10-D-S32302A, ICD-10-D-S32601A, ICD-10-D-S32602A
Wrist	ICD-9-D-81340, ICD-9-D-81341, ICD-9-D-81342, ICD-9-D-81343, ICD-9-D-81344, ICD-9-D-81345, ICD-9-D-81346, ICD-9-D-81347, ICD-9-D-73312, ICD-10-D-S5290XA, ICD-10-D-

	S52539A, ICD-10-D-S52549A, ICD-10-D-S52509A, ICD-10-D-S52609A, ICD-10-D-S52119A, ICD-10-D-S52529A, ICD-10-D-S52019A, ICD-10-D-S52629A, ICD-10-D-S52011A, ICD-10-D-S52012A, ICD-10-D-S52621A, ICD-10-D-S52622A, ICD-10-D-M84439A, ICD-10-D-S52501A, ICD-10-D-S52502A, ICD-10-D-S52511A, ICD-10-D-S52512A, ICD-10-D-S52513A, ICD-10-D-S52514A, ICD-10-D-S52515A, ICD-10-D-S52516A, ICD-10-D-S52521A, ICD-10-D-S52522A, ICD-10-D-S52531A, ICD-10-D-S52532A, ICD-10-D-S52541A, ICD-10-D-S52542A, ICD-10-D-S52551A, ICD-10-D-S52552A, ICD-10-D-S52559A, ICD-10-D-S52561A, ICD-10-D-S52562A, ICD-10-D-S52569A, ICD-10-D-S52571A, ICD-10-D-S52572A, ICD-10-D-S52579A, ICD-10-D-S52591A, ICD-10-D-S52592A, ICD-10-D-S52599A, ICD-10-D-S52111A, ICD-10-D-S52112A, ICD-10-D-S52601A, ICD-10-D-S52602A, ICD-10-D-S52611A, ICD-10-D-S52612A, ICD-10-D-S52613A, ICD-10-D-S52614A, ICD-10-D-S52615A, ICD-10-D-S52616A, ICD-10-D-S52691A, ICD-10-D-S52692A, ICD-10-D-S52699A, ICD-10-D-M84431A, ICD-9-D-81301, ICD-9-D-81302, ICD-9-D-81308, ICD-9-D-81381, ICD-9-D-81383
Humerus	ICD-9-D-81200, ICD-9-D-81201, ICD-9-D-81202, ICD-9-D-81203, ICD-9-D-81209, ICD-9-D-81220, ICD-9-D-81221, ICD-9-D-81240, ICD-9-D-81241, ICD-9-D-81242, ICD-9-D-81243, ICD-9-D-81244, ICD-9-D-81249, ICD-9-D-73311, ICD-10-D-S42209A, ICD-10-D-S42213A, ICD-10-D-S42216A, ICD-10-D-S42295A, ICD-10-D-S42253A, ICD-10-D-S42256A, ICD-10-D-S42296A, ICD-10-D-S42309A, ICD-10-D-S42399A, ICD-10-D-S42409A, ICD-10-D-S42413A, ICD-10-D-S42416A, ICD-10-D-S42433A, ICD-10-D-S42436A, ICD-10-D-S42453A, ICD-10-D-S42456A, ICD-10-D-S42443A, ICD-10-D-S42446A, ICD-10-D-S42463A, ICD-10-D-S42466A, ICD-10-D-S42473A, ICD-10-D-S42476A, ICD-10-D-S42493A, ICD-10-D-S42496A, ICD-10-D-M8440XA, ICD-10-D-S42201A, ICD-10-D-S42202A, ICD-10-D-S42211A, ICD-10-D-S42212A, ICD-10-D-S42214A, ICD-10-D-S42215A, ICD-10-D-S42221A, ICD-10-D-S42222A, ICD-10-D-S42223A, ICD-10-D-S42224A, ICD-10-D-S42225A, ICD-10-D-S42226A, ICD-10-D-S42231A, ICD-10-D-S42232A, ICD-10-D-S42239A, ICD-10-D-S42241A, ICD-10-D-S42242A, ICD-10-D-S42249A, ICD-10-D-S42251A, ICD-10-D-S42252A, ICD-10-D-S42254A, ICD-10-D-S42255A, ICD-10-D-S42261A, ICD-10-D-S42262A, ICD-10-D-S42264A, ICD-10-D-S42265A, ICD-10-D-S42266A, ICD-10-D-S42271A, ICD-10-D-S42272A, ICD-10-D-S42279A, ICD-10-D-S42291A, ICD-10-D-S42292A, ICD-10-D-S42293A, ICD-10-D-S42294A, ICD-10-D-S42301A, ICD-10-D-S42302A, ICD-10-D-S42391A, ICD-10-D-S42392A, ICD-10-D-S42331A, ICD-10-D-S42332A, ICD-10-D-S42344A, ICD-10-D-S42345A, ICD-10-D-S42401A, ICD-10-D-S42402A, ICD-10-D-S42411A, ICD-10-D-S42412A, ICD-10-D-S42414A, ICD-10-D-S42415A, ICD-10-D-S42421A, ICD-10-D-S42422A, ICD-10-D-S42423A, ICD-10-D-S42424A, ICD-10-D-S42425A, ICD-10-D-S42431A, ICD-10-D-S42432A, ICD-10-D-S42434A, ICD-10-D-S42435A, ICD-10-D-S42441A, ICD-10-D-S42442A, ICD-10-D-S42444A, ICD-10-D-S42445A, ICD-10-D-S42447A, ICD-10-D-S42448A, ICD-10-D-S42449A, ICD-10-D-S42451A, ICD-10-D-S42452A, ICD-10-D-S42454A, ICD-10-D-S42455A, ICD-10-D-S42461A, ICD-10-D-S42462A, ICD-10-D-S42464A, ICD-10-D-S42465A, ICD-10-D-S42471A, ICD-10-D-S42472A, ICD-10-D-S42474A, ICD-10-D-S42475A, ICD-10-D-S42481A, ICD-10-D-S42482A, ICD-10-D-S42491A, ICD-10-D-S42492A, ICD-10-D-S42494A, ICD-10-D-S42495A
Unspecified Pathologic Fractures	ICD-10-D-M8000XA, ICD-10-D-M8440XA, ICD-10-D-M8448XA, ICD-9-D-73310, ICD-9-D-73319
<b>Exclusion Criteria</b>	
Trauma	ICD-9-D-E8120, ICD-9-D-E8121, ICD-9-D-E8199, ICD-9-D-E8190, ICD-9-D-E8160, ICD-9-D-E8129, ICD-9-D-E8191, ICD-9-D-E8147, ICD-9-D-E8150, ICD-9-D-E8130, ICD-9-D-E8210, ICD-9-D-E8161, ICD-9-D-E8192, ICD-9-D-E8162, ICD-9-D-E8131, ICD-9-D-E8122, ICD-9-D-E8219, ICD-9-D-E8151, ICD-9-D-E8136, ICD-9-D-E8181, ICD-9-D-E8189, ICD-9-D-E8197, ICD-9-D-E8259, ICD-9-D-E8212, ICD-9-D-E8180, ICD-9-D-E8250, ICD-9-D-E8171, ICD-9-D-E8182, ICD-9-D-E8179, ICD-9-D-E8249, ICD-9-D-E8230, ICD-9-D-E8211, ICD-9-D-E8241, ICD-9-D-E8139, ICD-9-D-E8252, ICD-9-D-E8127, ICD-9-D-E8149, ICD-9-D-E8128, ICD-9-D-E8152, ICD-9-D-E8198, ICD-9-D-E8251, ICD-9-D-E8169, ICD-9-D-E9885, ICD-9-D-E8187, ICD-9-D-E8159, ICD-9-D-E8257, ICD-9-D-E8146, ICD-9-D-E8132, ICD-9-D-E8123, ICD-9-D-E8110, ICD-9-D-E8240, ICD-9-D-E8170, ICD-9-D-E8126, ICD-9-D-E8188, ICD-9-D-E8196, ICD-9-D-E8200, ICD-9-D-E8193, ICD-9-D-E8258, ICD-9-D-E8218, ICD-9-D-E8231, ICD-9-D-E8220, ICD-9-D-E8158, ICD-9-D-E8163, ICD-9-D-E8227, ICD-9-D-E8111, ICD-9-D-E8209,

ICD-9-D-E8140, ICD-9-D-E8248, ICD-9-D-E8217, ICD-9-D-E8138, ICD-9-D-E8183, ICD-9-D-E8232, ICD-9-D-E8682, ICD-9-D-E8100, ICD-9-D-E8178, ICD-9-D-E8137, ICD-9-D-E8148, ICD-9-D-E8239, ICD-9-D-E8221, ICD-9-D-E8141, ICD-9-D-E8242, ICD-9-D-E8186, ICD-9-D-E8229, ICD-9-D-E8237, ICD-9-D-E8172, ICD-9-D-E8119, ICD-9-D-E8133, ICD-9-D-E8216, ICD-9-D-E8124, ICD-9-D-E8177, ICD-9-D-E8213, ICD-9-D-E8168, ICD-9-D-E8101, ICD-9-D-E8208, ICD-9-D-E8153, ICD-9-D-E8157, ICD-9-D-E8194, ICD-9-D-E8222, ICD-9-D-E8134, ICD-9-D-E8167, ICD-9-D-E8226, ICD-9-D-E8142, ICD-9-D-E8201, ICD-9-D-E8166, ICD-9-D-E8109, ICD-9-D-E8154, ICD-9-D-E8174, ICD-9-D-E8256, ICD-9-D-E8156, ICD-9-D-E8238, ICD-9-D-E8253, ICD-9-D-E8143, ICD-9-D-E8228, ICD-9-D-E8195, ICD-9-D-E9820, ICD-9-D-E8173, ICD-9-D-E8184, ICD-9-D-E8164, ICD-9-D-E8202, ICD-9-D-E8243, ICD-9-D-E8247, ICD-9-D-E8112, ICD-9-D-E8203, ICD-9-D-E8236, ICD-9-D-E8102, ICD-9-D-E8107, ICD-9-D-E8103, ICD-9-D-E8104, ICD-9-D-E8106, ICD-9-D-E8108, ICD-9-D-E8113, ICD-9-D-E8114, ICD-9-D-E8115, ICD-9-D-E8118, ICD-9-D-E8125, ICD-9-D-E8135, ICD-9-D-E8144, ICD-9-D-E8145, ICD-9-D-E8155, ICD-9-D-E8175, ICD-9-D-E8176, ICD-9-D-E8185, ICD-9-D-E8204, ICD-9-D-E8205, ICD-9-D-E8206, ICD-9-D-E8207, ICD-9-D-E8214, ICD-9-D-E8215, ICD-9-D-E8223, ICD-9-D-E8224, ICD-9-D-E8225, ICD-9-D-E8233, ICD-9-D-E8234, ICD-9-D-E8244, ICD-9-D-E8245, ICD-9-D-E8246, ICD-9-D-E8254, ICD-9-D-E8255, ICD-9-D-E9871, ICD-9-D-E8849, ICD-9-D-E8810, ICD-9-D-E8801, ICD-9-D-E882, ICD-9-D-E8850, ICD-9-D-E8839, ICD-9-D-E8853, ICD-9-D-E8854, ICD-9-D-E9879, ICD-9-D-E8800, ICD-9-D-E8811, ICD-9-D-E8342, ICD-9-D-E8841, ICD-9-D-E8351, ICD-9-D-E8832, ICD-9-D-E8359, ICD-9-D-E8343, ICD-9-D-E8353, ICD-9-D-E8349, ICD-9-D-E8354, ICD-9-D-E8439, ICD-9-D-E8831, ICD-9-D-E8339, ICD-9-D-E8041, ICD-9-D-E8341, ICD-9-D-E8348, ICD-9-D-E8260, ICD-9-D-E8261, ICD-9-D-E8262, ICD-9-D-E8263, ICD-9-D-E8264, ICD-9-D-E8268, ICD-9-D-E8269, ICD-9-D-E8290, ICD-9-D-E8294, ICD-9-D-E8298, ICD-9-D-E8299, ICD-10-D-V0200XA, ICD-10-D-V0209XA, ICD-10-D-V0210XA, ICD-10-D-V0212XA, ICD-10-D-V0219XA, ICD-10-D-V0290XA, ICD-10-D-V0299XA, ICD-10-D-V0600XA, ICD-10-D-V0609XA, ICD-10-D-V0610XA, ICD-10-D-V0612XA, ICD-10-D-V0619XA, ICD-10-D-V0690XA, ICD-10-D-V0692XA, ICD-10-D-V0699XA, ICD-10-D-V0900XA, ICD-10-D-V0909XA, ICD-10-D-V0920XA, ICD-10-D-V0929XA, ICD-10-D-V120XXA, ICD-10-D-V121XXA, ICD-10-D-V122XXA, ICD-10-D-V123XXA, ICD-10-D-V124XXA, ICD-10-D-V125XXA, ICD-10-D-V129XXA, ICD-10-D-V160XXA, ICD-10-D-V162XXA, ICD-10-D-V163XXA, ICD-10-D-V164XXA, ICD-10-D-V169XXA, ICD-10-D-V1900XA, ICD-10-D-V1909XA, ICD-10-D-V1910XA, ICD-10-D-V1919XA, ICD-10-D-V1920XA, ICD-10-D-V1929XA, ICD-10-D-V1940XA, ICD-10-D-V1949XA, ICD-10-D-V1950XA, ICD-10-D-V1959XA, ICD-10-D-V1960XA, ICD-10-D-V1969XA, ICD-10-D-V220XXA, ICD-10-D-V221XXA, ICD-10-D-V222XXA, ICD-10-D-V223XXA, ICD-10-D-V224XXA, ICD-10-D-V225XXA, ICD-10-D-V229XXA, ICD-10-D-V240XXA, ICD-10-D-V241XXA, ICD-10-D-V244XXA, ICD-10-D-V245XXA, ICD-10-D-V249XXA, ICD-10-D-V250XXA, ICD-10-D-V254XXA, ICD-10-D-V255XXA, ICD-10-D-V259XXA, ICD-10-D-V260XXA, ICD-10-D-V261XXA, ICD-10-D-V262XXA, ICD-10-D-V263XXA, ICD-10-D-V264XXA, ICD-10-D-V265XXA, ICD-10-D-V269XXA, ICD-10-D-V2900XA, ICD-10-D-V2909XA, ICD-10-D-V2910XA, ICD-10-D-V2919XA, ICD-10-D-V2920XA, ICD-10-D-V2929XA, ICD-10-D-V2940XA, ICD-10-D-V2949XA, ICD-10-D-V2950XA, ICD-10-D-V2959XA, ICD-10-D-V2960XA, ICD-10-D-V2969XA, ICD-10-D-V2981XA, ICD-10-D-V300XXA, ICD-10-D-V302XXA, ICD-10-D-V306XXA, ICD-10-D-V307XXA, ICD-10-D-V309XXA, ICD-10-D-V310XXA, ICD-10-D-V315XXA, ICD-10-D-V320XXA, ICD-10-D-V321XXA, ICD-10-D-V322XXA, ICD-10-D-V325XXA, ICD-10-D-V326XXA, ICD-10-D-V327XXA, ICD-10-D-V329XXA, ICD-10-D-V330XXA, ICD-10-D-V331XXA, ICD-10-D-V335XXA, ICD-10-D-V336XXA, ICD-10-D-V339XXA, ICD-10-D-V342XXA, ICD-10-D-V343XXA, ICD-10-D-V346XXA, ICD-10-D-V349XXA, ICD-10-D-V353XXA, ICD-10-D-V356XXA, ICD-10-D-V360XXA, ICD-10-D-V361XXA, ICD-10-D-V363XXA, ICD-10-D-V365XXA, ICD-10-D-V366XXA, ICD-10-D-V369XXA, ICD-10-D-V370XXA, ICD-10-D-V371XXA, ICD-10-D-V373XXA, ICD-10-D-V375XXA, ICD-10-D-V376XXA, ICD-10-D-V377XXA, ICD-10-D-V379XXA, ICD-10-D-V380XXA, ICD-10-D-V381XXA, ICD-10-D-V383XXA, ICD-10-D-V384XXA, ICD-10-D-V385XXA, ICD-10-D-V386XXA, ICD-10-D-V389XXA, ICD-10-D-V3900XA, ICD-10-D-

	V3919XA, ICD-10-D-V3920XA, ICD-10-D-V393XXA, ICD-10-D-V3940XA, ICD-10-D-V3949XA, ICD-10-D-V3959XA, ICD-10-D-V3960XA, ICD-10-D-V3969XA, ICD-10-D-V3981XA, ICD-10-D-V3989XA, ICD-10-D-V399XXA, ICD-10-D-V420XXA, ICD-10-D-V421XXA, ICD-10-D-V422XXA, ICD-10-D-V424XXA, ICD-10-D-V425XXA, ICD-10-D-V426XXA, ICD-10-D-V427XXA, ICD-10-D-V429XXA, ICD-10-D-V460XXA, ICD-10-D-V461XXA, ICD-10-D-V462XXA, ICD-10-D-V463XXA, ICD-10-D-V464XXA, ICD-10-D-V465XXA, ICD-10-D-V466XXA, ICD-10-D-V467XXA, ICD-10-D-V469XXA, ICD-10-D-V4900XA, ICD-10-D-V4909XA, ICD-10-D-V4910XA, ICD-10-D-V4919XA, ICD-10-D-V4920XA, ICD-10-D-V4929XA, ICD-10-D-V4940XA, ICD-10-D-V4949XA, ICD-10-D-V4950XA, ICD-10-D-V4959XA, ICD-10-D-V4960XA, ICD-10-D-V4969XA, ICD-10-D-V525XXA, ICD-10-D-V526XXA, ICD-10-D-V529XXA, ICD-10-D-V561XXA, ICD-10-D-V564XXA, ICD-10-D-V565XXA, ICD-10-D-V566XXA, ICD-10-D-V567XXA, ICD-10-D-V569XXA, ICD-10-D-V5900XA, ICD-10-D-V5909XA, ICD-10-D-V5910XA, ICD-10-D-V5919XA, ICD-10-D-V5920XA, ICD-10-D-V5929XA, ICD-10-D-V5940XA, ICD-10-D-V5949XA, ICD-10-D-V5950XA, ICD-10-D-V5959XA, ICD-10-D-V5960XA, ICD-10-D-V5969XA, ICD-10-D-V621XXA, ICD-10-D-V624XXA, ICD-10-D-V629XXA, ICD-10-D-V665XXA, ICD-10-D-V666XXA, ICD-10-D-V667XXA, ICD-10-D-V6900XA, ICD-10-D-V6909XA, ICD-10-D-V6910XA, ICD-10-D-V6920XA, ICD-10-D-V6940XA, ICD-10-D-V6949XA, ICD-10-D-V6950XA, ICD-10-D-V6959XA, ICD-10-D-V6960XA, ICD-10-D-V721XXA, ICD-10-D-V722XXA, ICD-10-D-V723XXA, ICD-10-D-V724XXA, ICD-10-D-V726XXA, ICD-10-D-V760XXA, ICD-10-D-V761XXA, ICD-10-D-V762XXA, ICD-10-D-V763XXA, ICD-10-D-V764XXA, ICD-10-D-V765XXA, ICD-10-D-V766XXA, ICD-10-D-V769XXA, ICD-10-D-V7900XA, ICD-10-D-V7909XA, ICD-10-D-V7910XA, ICD-10-D-V7919XA, ICD-10-D-V7920XA, ICD-10-D-V7940XA, ICD-10-D-V7949XA, ICD-10-D-V7950XA, ICD-10-D-V7959XA, ICD-10-D-V7960XA, ICD-10-D-V7969XA, ICD-10-D-V8051XA, ICD-10-D-V8052XA, ICD-10-D-V80790A, ICD-10-D-V810XXA, ICD-10-D-V811XXA, ICD-10-D-V820XXA, ICD-10-D-V821XXA, ICD-10-D-V8609XA, ICD-10-D-V8619XA, ICD-10-D-V8629XA, ICD-10-D-V8639XA, ICD-10-D-V8649XA, ICD-10-D-V8659XA, ICD-10-D-V8669XA, ICD-10-D-V8679XA, ICD-10-D-V8699XA, ICD-10-D-V871XXA, ICD-10-D-V877XXA, ICD-10-D-V878XXA, ICD-10-D-V879XXA, ICD-10-D-V880XXA, ICD-10-D-V881XXA, ICD-10-D-V887XXA, ICD-10-D-V888XXA, ICD-10-D-V889XXA, ICD-10-D-V890XXA, ICD-10-D-V891XXA, ICD-10-D-V892XXA, ICD-10-D-V893XXA, ICD-10-D-X810XXA, ICD-10-D-X820XXA, ICD-10-D-X822XXA, ICD-10-D-X828XXA, ICD-10-D-Y020XXA, ICD-10-D-Y030XXA, ICD-10-D-Y038XXA, ICD-10-D-Y32XXXA, ICD-10-D-W002XXA, ICD-10-D-W1789XA, ICD-10-D-W1843XA, ICD-10-D-W109XXA, ICD-10-D-W11XXXA, ICD-10-D-W009XXA, ICD-10-D-W1781XA, ICD-10-D-W14XXXA, ICD-10-D-W132XXA, ICD-10-D-V00321A, ICD-10-D-W051XXA, ICD-10-D-W1782XA, ICD-10-D-V00121A, ICD-10-D-W001XXA, ICD-10-D-W138XXA, ICD-10-D-V00311A, ICD-10-D-W100XXA, ICD-10-D-W133XXA, ICD-10-D-W134XXA, ICD-10-D-W139XXA, ICD-10-D-W12XXXA, ICD-10-D-V00181A, ICD-10-D-W130XXA, ICD-10-D-V9339XA, ICD-10-D-W15XXXA, ICD-10-D-V00891A, ICD-10-D-W131XXA, ICD-10-D-W171XXA, ICD-10-D-V815XXA, ICD-10-D-W170XXA, ICD-10-D-W173XXA
ESRD	ICD-9-D-5856, ICD-10-D-N186
Achalasia	ICD-9-D-5300, ICD-10-D-K220
Multiple Myeloma	ICD-9-D-20300, ICD-9-D-20301, ICD-9-D-20302, ICD-10-D-C9002, ICD-10-D-C9001, ICD-10-D-C9000
Paget's Disease	ICD-9-D-7310, ICD-9-D-7311, ICD-10-D-M880, ICD-10-D-M881, ICD-10-D-M88811, ICD-10-D-M88812, ICD-10-D-M88819, ICD-10-D-M88821, ICD-10-D-M88822, ICD-10-D-M88829, ICD-10-D-M88831, ICD-10-D-M88832, ICD-10-D-M88839, ICD-10-D-M88841, ICD-10-D-M88849, ICD-10-D-M88851, ICD-10-D-M88852, ICD-10-D-M88859, ICD-10-D-M88861, ICD-10-D-M88862, ICD-10-D-M88869, ICD-10-D-M88871, ICD-10-D-M88872, ICD-10-D-M8888, ICD-10-D-M8889, ICD-10-D-M889, ICD-10-D-M9060, ICD-10-D-M90621, ICD-10-D-M90641, ICD-10-D-M90651, ICD-10-D-M90652, ICD-10-D-M90661, ICD-10-D-M90671, ICD-10-D-M90672, ICD-10-D-M9068, ICD-10-D-M9069

Hyperparathyroidism	ICD-9-D-25200, ICD-9-D-25201, ICD-9-D-25202, ICD-9-D-25208, ICD-9-D-58881, ICD-10-D-E210, ICD-10-D-E211, ICD-10-D-E212, ICD-10-D-E213, ICD-10-D-N2581
Drug Allergy	ICD-9-D-V148, ICD-10-D-Z888
Cushing's Disease	ICD-9-D-2550, ICD-10-D-E240, ICD-10-D-E242, ICD-10-D-E244, ICD-10-D-E248, ICD-10-D-E249
Sarcoidosis	ICD-9-D-135, ICD-10-D-D860, ICD-10-D-D861, ICD-10-D-D862, ICD-10-D-D863, ICD-10-D-D867
Systemic Lupus Erythematosus	ICD-9-D-7100, ICD-10-D-M3210, ICD-10-D-M329
Inflammatory Bowel Disease	ICD-9-D-5550, ICD-9-D-5551, ICD-9-D-5552, ICD-9-D-5559, ICD-10-D-K5000, ICD-10-D-K50011, ICD-10-D-K50012, ICD-10-D-K50013, ICD-10-D-K50014, ICD-10-D-K50018, ICD-10-D-K50019, ICD-10-D-K5010, ICD-10-D-K50111, ICD-10-D-K50112, ICD-10-D-K50113, ICD-10-D-K50114, ICD-10-D-K50118, ICD-10-D-K50119, ICD-10-D-K5080, ICD-10-D-K50811, ICD-10-D-K50812, ICD-10-D-K50813, ICD-10-D-K50814, ICD-10-D-K50818, ICD-10-D-K50819, ICD-10-D-K5090, ICD-10-D-K50911, ICD-10-D-K50912, ICD-10-D-K50913, ICD-10-D-K50914, ICD-10-D-K50918, ICD-10-D-K50919, ICD-10-D-K5100, ICD-10-D-K51011, ICD-10-D-K51012, ICD-10-D-K51013, ICD-10-D-K51014, ICD-10-D-K51018, ICD-10-D-K51019, ICD-10-D-K5180, ICD-10-D-K51811, ICD-10-D-K51812, ICD-10-D-K51813, ICD-10-D-K51814, ICD-10-D-K51818, ICD-10-D-K51819, ICD-10-D-K5190, ICD-10-D-K51911, ICD-10-D-K51912, ICD-10-D-K51913, ICD-10-D-K51914, ICD-10-D-K51918, ICD-10-D-K51919
Rheumatoid Arthritis	ICD-9-D-7140, ICD-10-D-M069
Celiac Disease	ICD-9-D-5790, ICD-10-D-K900
Hyperthyroidism	ICD-9-D-24290, ICD-9-D-24200, ICD-10-D-E0590, ICD-10-D-E0500, ICD-10-D-E0520, ICD-10-D-E0591
Malignancy	ICD-9-D-17301, ICD-9-D-17302, ICD-9-D-17311, ICD-9-D-17312, ICD-9-D-17321, ICD-9-D-17322, ICD-9-D-17331, ICD-9-D-17332, ICD-9-D-17341, ICD-9-D-17342, ICD-9-D-17351, ICD-9-D-17352, ICD-9-D-17361, ICD-9-D-17362, ICD-9-D-17371, ICD-9-D-17372, ICD-9-D-17381, ICD-9-D-17382, ICD-9-D-17391, ICD-9-D-17392, ICD-9-D-20930, ICD-9-D-1400, ICD-9-D-1401, ICD-9-D-1403, ICD-9-D-1404, ICD-9-D-1405, ICD-9-D-1406, ICD-9-D-1408, ICD-9-D-1409, ICD-9-D-1410, ICD-9-D-1411, ICD-9-D-1412, ICD-9-D-1413, ICD-9-D-1414, ICD-9-D-1415, ICD-9-D-1416, ICD-9-D-1418, ICD-9-D-1419, ICD-9-D-1420, ICD-9-D-1421, ICD-9-D-1422, ICD-9-D-1428, ICD-9-D-1429, ICD-9-D-1430, ICD-9-D-1431, ICD-9-D-1438, ICD-9-D-1439, ICD-9-D-1440, ICD-9-D-1441, ICD-9-D-1448, ICD-9-D-1449, ICD-9-D-1450, ICD-9-D-1451, ICD-9-D-1452, ICD-9-D-1453, ICD-9-D-1454, ICD-9-D-1455, ICD-9-D-1456, ICD-9-D-1458, ICD-9-D-1459, ICD-9-D-1460, ICD-9-D-1461, ICD-9-D-1462, ICD-9-D-1463, ICD-9-D-1464, ICD-9-D-1465, ICD-9-D-1466, ICD-9-D-1467, ICD-9-D-1468, ICD-9-D-1469, ICD-9-D-1470, ICD-9-D-1471, ICD-9-D-1472, ICD-9-D-1473, ICD-9-D-1478, ICD-9-D-1479, ICD-9-D-1480, ICD-9-D-1481, ICD-9-D-1482, ICD-9-D-1483, ICD-9-D-1488, ICD-9-D-1489, ICD-9-D-1490, ICD-9-D-1491, ICD-9-D-1498, ICD-9-D-1499, ICD-9-D-1500, ICD-9-D-1501, ICD-9-D-1502, ICD-9-D-1503, ICD-9-D-1504, ICD-9-D-1505, ICD-9-D-1508, ICD-9-D-1509, ICD-9-D-1510, ICD-9-D-1511, ICD-9-D-1512, ICD-9-D-1513, ICD-9-D-1514, ICD-9-D-1515, ICD-9-D-1516, ICD-9-D-1518, ICD-9-D-1519, ICD-9-D-1520, ICD-9-D-1521, ICD-9-D-1522, ICD-9-D-1523, ICD-9-D-1528, ICD-9-D-1529, ICD-9-D-1530, ICD-9-D-1531, ICD-9-D-1532, ICD-9-D-1533, ICD-9-D-1534, ICD-9-D-1535, ICD-9-D-1536, ICD-9-D-1537, ICD-9-D-1538, ICD-9-D-1539, ICD-9-D-1540, ICD-9-D-1541, ICD-9-D-1542, ICD-9-D-1543, ICD-9-D-1548, ICD-9-D-1550, ICD-9-D-1551, ICD-9-D-1552, ICD-9-D-1560, ICD-9-D-1561, ICD-9-D-1562, ICD-9-D-1568, ICD-9-D-1569, ICD-9-D-1570, ICD-9-D-1571, ICD-9-D-1572, ICD-9-D-1573, ICD-9-D-1574, ICD-9-D-1578, ICD-9-D-1579, ICD-9-D-1580, ICD-9-D-1588, ICD-9-D-1589, ICD-9-D-1590, ICD-9-D-1591, ICD-9-D-1598, ICD-9-D-1599, ICD-9-D-1600, ICD-9-D-1601, ICD-9-D-1602, ICD-9-D-1603, ICD-9-D-1604, ICD-9-D-1605, ICD-9-D-1608, ICD-9-D-1609, ICD-9-D-1610, ICD-9-D-1611, ICD-9-D-1612, ICD-9-D-1613, ICD-9-D-1618, ICD-9-D-1619, ICD-9-D-1620, ICD-9-D-1622, ICD-9-D-1623, ICD-9-D-1624, ICD-9-D-1625, ICD-9-D-1628, ICD-9-D-1629, ICD-9-D-1630, ICD-9-D-1631, ICD-9-D-1638, ICD-9-D-1639, ICD-9-D-1640, ICD-9-D-1641, ICD-9-D-1642, ICD-9-D-1643, ICD-9-D-1648, ICD-9-D-1649, ICD-9-D-1650, ICD-

9-D-1658, ICD-9-D-1659, ICD-9-D-1700, ICD-9-D-1701, ICD-9-D-1702, ICD-9-D-1703, ICD-9-D-1704, ICD-9-D-1705, ICD-9-D-1706, ICD-9-D-1707, ICD-9-D-1708, ICD-9-D-1709, ICD-9-D-1710, ICD-9-D-1712, ICD-9-D-1713, ICD-9-D-1714, ICD-9-D-1715, ICD-9-D-1716, ICD-9-D-1717, ICD-9-D-1718, ICD-9-D-1719, ICD-9-D-17300, ICD-9-D-17309, ICD-9-D-17310, ICD-9-D-17319, ICD-9-D-17320, ICD-9-D-17329, ICD-9-D-17330, ICD-9-D-17339, ICD-9-D-17340, ICD-9-D-17349, ICD-9-D-17350, ICD-9-D-17359, ICD-9-D-17360, ICD-9-D-17369, ICD-9-D-17370, ICD-9-D-17379, ICD-9-D-17380, ICD-9-D-17389, ICD-9-D-17390, ICD-9-D-17399, ICD-9-D-1740, ICD-9-D-1741, ICD-9-D-1742, ICD-9-D-1743, ICD-9-D-1744, ICD-9-D-1745, ICD-9-D-1746, ICD-9-D-1748, ICD-9-D-1749, ICD-9-D-1750, ICD-9-D-1759, ICD-9-D-179, ICD-9-D-1800, ICD-9-D-1801, ICD-9-D-1808, ICD-9-D-1809, ICD-9-D-181, ICD-9-D-1820, ICD-9-D-1821, ICD-9-D-1828, ICD-9-D-1830, ICD-9-D-1832, ICD-9-D-1833, ICD-9-D-1834, ICD-9-D-1835, ICD-9-D-1838, ICD-9-D-1839, ICD-9-D-1840, ICD-9-D-1841, ICD-9-D-1842, ICD-9-D-1843, ICD-9-D-1844, ICD-9-D-1848, ICD-9-D-1849, ICD-9-D-185, ICD-9-D-1860, ICD-9-D-1869, ICD-9-D-1871, ICD-9-D-1872, ICD-9-D-1873, ICD-9-D-1874, ICD-9-D-1875, ICD-9-D-1876, ICD-9-D-1877, ICD-9-D-1878, ICD-9-D-1879, ICD-9-D-1880, ICD-9-D-1881, ICD-9-D-1882, ICD-9-D-1883, ICD-9-D-1884, ICD-9-D-1885, ICD-9-D-1886, ICD-9-D-1887, ICD-9-D-1888, ICD-9-D-1889, ICD-9-D-1890, ICD-9-D-1891, ICD-9-D-1892, ICD-9-D-1893, ICD-9-D-1894, ICD-9-D-1898, ICD-9-D-1899, ICD-9-D-1900, ICD-9-D-1901, ICD-9-D-1902, ICD-9-D-1903, ICD-9-D-1904, ICD-9-D-1905, ICD-9-D-1906, ICD-9-D-1907, ICD-9-D-1908, ICD-9-D-1909, ICD-9-D-1910, ICD-9-D-1911, ICD-9-D-1912, ICD-9-D-1913, ICD-9-D-1914, ICD-9-D-1915, ICD-9-D-1916, ICD-9-D-1917, ICD-9-D-1918, ICD-9-D-1919, ICD-9-D-1920, ICD-9-D-1921, ICD-9-D-1922, ICD-9-D-1923, ICD-9-D-1928, ICD-9-D-1929, ICD-9-D-193, ICD-9-D-1940, ICD-9-D-1941, ICD-9-D-1943, ICD-9-D-1944, ICD-9-D-1945, ICD-9-D-1946, ICD-9-D-1948, ICD-9-D-1949, ICD-9-D-1950, ICD-9-D-1951, ICD-9-D-1952, ICD-9-D-1953, ICD-9-D-1954, ICD-9-D-1955, ICD-9-D-1958, ICD-9-D-1960, ICD-9-D-1961, ICD-9-D-1962, ICD-9-D-1963, ICD-9-D-1965, ICD-9-D-1966, ICD-9-D-1968, ICD-9-D-1969, ICD-9-D-1970, ICD-9-D-1971, ICD-9-D-1972, ICD-9-D-1973, ICD-9-D-1974, ICD-9-D-1975, ICD-9-D-1976, ICD-9-D-1977, ICD-9-D-1978, ICD-9-D-1980, ICD-9-D-1981, ICD-9-D-1982, ICD-9-D-1983, ICD-9-D-1984, ICD-9-D-1985, ICD-9-D-1986, ICD-9-D-1987, ICD-9-D-19881, ICD-9-D-19882, ICD-9-D-19889, ICD-9-D-1990, ICD-9-D-1991, ICD-9-D-1992, ICD-9-D-20290, ICD-9-D-20291, ICD-9-D-20292, ICD-9-D-20293, ICD-9-D-20294, ICD-9-D-20295, ICD-9-D-20296, ICD-9-D-20297, ICD-9-D-20298, ICD-10-D-C000, ICD-10-D-C001, ICD-10-D-C002, ICD-10-D-C003, ICD-10-D-C004, ICD-10-D-C005, ICD-10-D-C006, ICD-10-D-C008, ICD-10-D-C009, ICD-10-D-C01, ICD-10-D-C020, ICD-10-D-C021, ICD-10-D-C022, ICD-10-D-C023, ICD-10-D-C024, ICD-10-D-C028, ICD-10-D-C029, ICD-10-D-C030, ICD-10-D-C031, ICD-10-D-C039, ICD-10-D-C040, ICD-10-D-C041, ICD-10-D-C048, ICD-10-D-C049, ICD-10-D-C050, ICD-10-D-C051, ICD-10-D-C052, ICD-10-D-C058, ICD-10-D-C059, ICD-10-D-C060, ICD-10-D-C061, ICD-10-D-C062, ICD-10-D-C0680, ICD-10-D-C0689, ICD-10-D-C069, ICD-10-D-C07, ICD-10-D-C080, ICD-10-D-C081, ICD-10-D-C089, ICD-10-D-C090, ICD-10-D-C091, ICD-10-D-C098, ICD-10-D-C099, ICD-10-D-C100, ICD-10-D-C101, ICD-10-D-C102, ICD-10-D-C103, ICD-10-D-C104, ICD-10-D-C108, ICD-10-D-C109, ICD-10-D-C110, ICD-10-D-C111, ICD-10-D-C112, ICD-10-D-C113, ICD-10-D-C118, ICD-10-D-C119, ICD-10-D-C12, ICD-10-D-C130, ICD-10-D-C131, ICD-10-D-C132, ICD-10-D-C138, ICD-10-D-C139, ICD-10-D-C140, ICD-10-D-C142, ICD-10-D-C148, ICD-10-D-C153, ICD-10-D-C154, ICD-10-D-C155, ICD-10-D-C158, ICD-10-D-C159, ICD-10-D-C160, ICD-10-D-C161, ICD-10-D-C162, ICD-10-D-C163, ICD-10-D-C164, ICD-10-D-C165, ICD-10-D-C166, ICD-10-D-C168, ICD-10-D-C169, ICD-10-D-C170, ICD-10-D-C171, ICD-10-D-C172, ICD-10-D-C178, ICD-10-D-C179, ICD-10-D-C180, ICD-10-D-C181, ICD-10-D-C182, ICD-10-D-C183, ICD-10-D-C184, ICD-10-D-C185, ICD-10-D-C186, ICD-10-D-C187, ICD-10-D-C188, ICD-10-D-C189, ICD-10-D-C19, ICD-10-D-C20, ICD-10-D-C210, ICD-10-D-C211, ICD-10-D-C212, ICD-10-D-C218, ICD-10-D-C228, ICD-10-D-C229, ICD-10-D-C23, ICD-10-D-C240, ICD-10-D-C241, ICD-10-D-C248, ICD-10-D-C249, ICD-10-D-C250, ICD-10-D-C251, ICD-10-D-C252, ICD-10-D-C253, ICD-10-D-C254, ICD-10-D-C257, ICD-10-D-C258, ICD-10-D-C259, ICD-10-D-C260, ICD-10-D-C261, ICD-10-D-C269, ICD-10-D-C300, ICD-10-D-C301, ICD-10-D-C310, ICD-10-D-C311, ICD-10-D-C312, ICD-10-D-C313, ICD-10-D-C318, ICD-10-D-C319, ICD-10-D-C320, ICD-10-D-C321, ICD-10-D-C322, ICD-10-

D-C323, ICD-10-D-C328, ICD-10-D-C329, ICD-10-D-C33, ICD-10-D-C3400, ICD-10-D-C3401, ICD-10-D-C3402, ICD-10-D-C3410, ICD-10-D-C3411, ICD-10-D-C3412, ICD-10-D-C342, ICD-10-D-C3430, ICD-10-D-C3431, ICD-10-D-C3432, ICD-10-D-C3480, ICD-10-D-C3481, ICD-10-D-C3482, ICD-10-D-C3490, ICD-10-D-C3491, ICD-10-D-C3492, ICD-10-D-C37, ICD-10-D-C380, ICD-10-D-C381, ICD-10-D-C382, ICD-10-D-C383, ICD-10-D-C384, ICD-10-D-C388, ICD-10-D-C390, ICD-10-D-C399, ICD-10-D-C4000, ICD-10-D-C4001, ICD-10-D-C4002, ICD-10-D-C4010, ICD-10-D-C4011, ICD-10-D-C4012, ICD-10-D-C4020, ICD-10-D-C4021, ICD-10-D-C4022, ICD-10-D-C4030, ICD-10-D-C4031, ICD-10-D-C4032, ICD-10-D-C4080, ICD-10-D-C4081, ICD-10-D-C4082, ICD-10-D-C4090, ICD-10-D-C4091, ICD-10-D-C4092, ICD-10-D-C410, ICD-10-D-C411, ICD-10-D-C412, ICD-10-D-C413, ICD-10-D-C414, ICD-10-D-C419, ICD-10-D-C4400, ICD-10-D-C4409, ICD-10-D-C44101, ICD-10-D-C44102, ICD-10-D-C44109, ICD-10-D-C44191, ICD-10-D-C44192, ICD-10-D-C44199, ICD-10-D-C44201, ICD-10-D-C44202, ICD-10-D-C44209, ICD-10-D-C44291, ICD-10-D-C44292, ICD-10-D-C44299, ICD-10-D-C44300, ICD-10-D-C44301, ICD-10-D-C44309, ICD-10-D-C44390, ICD-10-D-C44391, ICD-10-D-C44399, ICD-10-D-C4440, ICD-10-D-C4449, ICD-10-D-C44500, ICD-10-D-C44501, ICD-10-D-C44509, ICD-10-D-C44590, ICD-10-D-C44591, ICD-10-D-C44599, ICD-10-D-C44601, ICD-10-D-C44602, ICD-10-D-C44609, ICD-10-D-C44691, ICD-10-D-C44692, ICD-10-D-C44699, ICD-10-D-C44701, ICD-10-D-C44702, ICD-10-D-C44709, ICD-10-D-C44791, ICD-10-D-C44792, ICD-10-D-C44799, ICD-10-D-C4480, ICD-10-D-C4489, ICD-10-D-C4490, ICD-10-D-C4499, ICD-10-D-C470, ICD-10-D-C4710, ICD-10-D-C4711, ICD-10-D-C4712, ICD-10-D-C4720, ICD-10-D-C4721, ICD-10-D-C4722, ICD-10-D-C473, ICD-10-D-C474, ICD-10-D-C475, ICD-10-D-C476, ICD-10-D-C478, ICD-10-D-C479, ICD-10-D-C480, ICD-10-D-C481, ICD-10-D-C482, ICD-10-D-C488, ICD-10-D-C490, ICD-10-D-C4910, ICD-10-D-C4911, ICD-10-D-C4912, ICD-10-D-C4920, ICD-10-D-C4921, ICD-10-D-C4922, ICD-10-D-C493, ICD-10-D-C494, ICD-10-D-C495, ICD-10-D-C496, ICD-10-D-C498, ICD-10-D-C499, ICD-10-D-C50011, ICD-10-D-C50012, ICD-10-D-C50019, ICD-10-D-C50021, ICD-10-D-C50022, ICD-10-D-C50029, ICD-10-D-C50111, ICD-10-D-C50112, ICD-10-D-C50119, ICD-10-D-C50121, ICD-10-D-C50122, ICD-10-D-C50129, ICD-10-D-C50211, ICD-10-D-C50212, ICD-10-D-C50219, ICD-10-D-C50221, ICD-10-D-C50222, ICD-10-D-C50229, ICD-10-D-C50311, ICD-10-D-C50312, ICD-10-D-C50319, ICD-10-D-C50321, ICD-10-D-C50322, ICD-10-D-C50329, ICD-10-D-C50411, ICD-10-D-C50412, ICD-10-D-C50419, ICD-10-D-C50421, ICD-10-D-C50422, ICD-10-D-C50429, ICD-10-D-C50511, ICD-10-D-C50512, ICD-10-D-C50519, ICD-10-D-C50521, ICD-10-D-C50522, ICD-10-D-C50529, ICD-10-D-C50611, ICD-10-D-C50612, ICD-10-D-C50619, ICD-10-D-C50621, ICD-10-D-C50622, ICD-10-D-C50629, ICD-10-D-C50811, ICD-10-D-C50812, ICD-10-D-C50819, ICD-10-D-C50821, ICD-10-D-C50822, ICD-10-D-C50829, ICD-10-D-C50911, ICD-10-D-C50912, ICD-10-D-C50919, ICD-10-D-C50921, ICD-10-D-C50922, ICD-10-D-C50929, ICD-10-D-C510, ICD-10-D-C511, ICD-10-D-C512, ICD-10-D-C518, ICD-10-D-C519, ICD-10-D-C52, ICD-10-D-C530, ICD-10-D-C531, ICD-10-D-C538, ICD-10-D-C539, ICD-10-D-C540, ICD-10-D-C541, ICD-10-D-C542, ICD-10-D-C543, ICD-10-D-C548, ICD-10-D-C549, ICD-10-D-C55, ICD-10-D-C561, ICD-10-D-C562, ICD-10-D-C569, ICD-10-D-C5700, ICD-10-D-C5701, ICD-10-D-C5702, ICD-10-D-C5710, ICD-10-D-C5711, ICD-10-D-C5712, ICD-10-D-C5720, ICD-10-D-C5721, ICD-10-D-C5722, ICD-10-D-C573, ICD-10-D-C574, ICD-10-D-C577, ICD-10-D-C578, ICD-10-D-C579, ICD-10-D-C58, ICD-10-D-C600, ICD-10-D-C601, ICD-10-D-C602, ICD-10-D-C608, ICD-10-D-C609, ICD-10-D-C61, ICD-10-D-C6200, ICD-10-D-C6201, ICD-10-D-C6202, ICD-10-D-C6210, ICD-10-D-C6211, ICD-10-D-C6212, ICD-10-D-C6290, ICD-10-D-C6291, ICD-10-D-C6292, ICD-10-D-C6300, ICD-10-D-C6301, ICD-10-D-C6302, ICD-10-D-C6310, ICD-10-D-C6311, ICD-10-D-C6312, ICD-10-D-C632, ICD-10-D-C637, ICD-10-D-C638, ICD-10-D-C639, ICD-10-D-C641, ICD-10-D-C642, ICD-10-D-C649, ICD-10-D-C651, ICD-10-D-C652, ICD-10-D-C659, ICD-10-D-C661, ICD-10-D-C662, ICD-10-D-C669, ICD-10-D-C670, ICD-10-D-C671, ICD-10-D-C672, ICD-10-D-C673, ICD-10-D-C674, ICD-10-D-C675, ICD-10-D-C676, ICD-10-D-C677, ICD-10-D-C678, ICD-10-D-C679, ICD-10-D-C680, ICD-10-D-C681, ICD-10-D-C688, ICD-10-D-C689, ICD-10-D-C6900, ICD-10-D-C6901, ICD-10-D-C6902, ICD-10-D-C6910, ICD-10-D-C6911, ICD-10-D-C6912, ICD-10-D-C6920, ICD-10-D-C6921, ICD-10-D-C6922, ICD-10-D-C6930, ICD-10-D-C6931, ICD-10-D-C6932, ICD-10-D-C6940, ICD-10-D-

	C6941, ICD-10-D-C6942, ICD-10-D-C6950, ICD-10-D-C6951, ICD-10-D-C6952, ICD-10-D-C6960, ICD-10-D-C6961, ICD-10-D-C6962, ICD-10-D-C6980, ICD-10-D-C6981, ICD-10-D-C6982, ICD-10-D-C6990, ICD-10-D-C6991, ICD-10-D-C6992, ICD-10-D-C700, ICD-10-D-C701, ICD-10-D-C709, ICD-10-D-C710, ICD-10-D-C711, ICD-10-D-C712, ICD-10-D-C713, ICD-10-D-C714, ICD-10-D-C715, ICD-10-D-C716, ICD-10-D-C717, ICD-10-D-C718, ICD-10-D-C719, ICD-10-D-C720, ICD-10-D-C721, ICD-10-D-C7220, ICD-10-D-C7221, ICD-10-D-C7222, ICD-10-D-C7230, ICD-10-D-C7231, ICD-10-D-C7232, ICD-10-D-C7240, ICD-10-D-C7241, ICD-10-D-C7242, ICD-10-D-C7250, ICD-10-D-C7259, ICD-10-D-C729, ICD-10-D-C73, ICD-10-D-C7400, ICD-10-D-C7401, ICD-10-D-C7402, ICD-10-D-C7410, ICD-10-D-C7411, ICD-10-D-C7412, ICD-10-D-C7490, ICD-10-D-C7491, ICD-10-D-C7492, ICD-10-D-C750, ICD-10-D-C751, ICD-10-D-C752, ICD-10-D-C753, ICD-10-D-C754, ICD-10-D-C755, ICD-10-D-C758, ICD-10-D-C759, ICD-10-D-C760, ICD-10-D-C761, ICD-10-D-C762, ICD-10-D-C763, ICD-10-D-C7640, ICD-10-D-C7641, ICD-10-D-C7642, ICD-10-D-C7650, ICD-10-D-C7651, ICD-10-D-C7652, ICD-10-D-C768, ICD-10-D-C770, ICD-10-D-C771, ICD-10-D-C772, ICD-10-D-C773, ICD-10-D-C774, ICD-10-D-C775, ICD-10-D-C778, ICD-10-D-C779, ICD-10-D-C7800, ICD-10-D-C7801, ICD-10-D-C7802, ICD-10-D-C781, ICD-10-D-C782, ICD-10-D-C7830, ICD-10-D-C7839, ICD-10-D-C784, ICD-10-D-C785, ICD-10-D-C786, ICD-10-D-C787, ICD-10-D-C7880, ICD-10-D-C7889, ICD-10-D-C7900, ICD-10-D-C7901, ICD-10-D-C7902, ICD-10-D-C7910, ICD-10-D-C7911, ICD-10-D-C7919, ICD-10-D-C792, ICD-10-D-C7931, ICD-10-D-C7932, ICD-10-D-C7940, ICD-10-D-C7949, ICD-10-D-C7951, ICD-10-D-C7952, ICD-10-D-C7960, ICD-10-D-C7961, ICD-10-D-C7962, ICD-10-D-C7970, ICD-10-D-C7971, ICD-10-D-C7972, ICD-10-D-C7981, ICD-10-D-C7982, ICD-10-D-C7989, ICD-10-D-C799, ICD-10-D-C800, ICD-10-D-C801, ICD-10-D-C802, ICD-10-D-C9620, ICD-10-D-C9629, ICD-10-D-C969, ICD-10-D-C96Z, ICD-10-D-C44319, ICD-10-D-C44622, ICD-10-D-C44629, ICD-10-D-C4492, ICD-10-D-C44329, ICD-10-D-C4442, ICD-10-D-C44311, ICD-10-D-C4491, ICD-10-D-C4441, ICD-10-D-C44519, ICD-10-D-C44222, ICD-10-D-C44320, ICD-10-D-C44712, ICD-10-D-C44719, ICD-10-D-C44229, ICD-10-D-D0461, ICD-10-D-C4401, ICD-10-D-D045, ICD-10-D-D044, ICD-10-D-D0462, ICD-10-D-C44212, ICD-10-D-C44722, ICD-10-D-C44729, ICD-10-D-C44219, ICD-10-D-D069, ICD-10-D-C44529, ICD-10-D-C220, ICD-10-D-C44612, ICD-10-D-D0511, ICD-10-D-C44619, ICD-10-D-C44310, ICD-10-D-D0512, ICD-10-D-C4402, ICD-10-D-D0510, ICD-10-D-D0471, ICD-10-D-D090, ICD-10-D-D0472, ICD-10-D-C221, ICD-10-D-D0590, ICD-10-D-C44112, ICD-10-D-C44119, ICD-10-D-C44321, ICD-10-D-C44611, ICD-10-D-C227, ICD-10-D-C44721, ICD-10-D-C4481, ICD-10-D-C44211, ICD-10-D-C44129, ICD-10-D-C44221, ICD-10-D-C4482, ICD-10-D-C44511, ICD-10-D-C44122, ICD-10-D-C44520
Esophageal Varices	ICD-9-D-4560, ICD-9-D-4561, ICD-10-D-I8500, ICD-10-D-I8501
Esophageal Stricture	ICD-9-D-5303, ICD-10-D-Q393
Barrett Esophagus	ICD-9-D-53085, ICD-10-D-K2270, ICD-10-D-K22710, ICD-10-D-K22711, ICD-10-D-K22719
Roux-en-Y Bypass	CPT-43621, CPT-43633, CPT-43644
Multiple Sclerosis	ICD-9-D-340, ICD-10-D-G35
Vasculitides	ICD-9-D-4465, ICD-9-D-4464, ICD-9-D-4460, ICD-10-D-M315, ICD-10-D-M316, ICD-10-D-M3130, ICD-10-D-M3131, ICD-10-D-M317, ICD-10-D-M300, ICD-10-D-M301
Inflammatory Myopathic Diseases	ICD-9-D-7103, ICD-9-D-7104, ICD-9-D-725, ICD-10-D-M3390, ICD-10-D-M3220, ICD-10-D-M353
Sickle Cell	ICD-9-D-28241, ICD-9-D-28242, ICD-9-D-28260, ICD-9-D-28263, ICD-9-D-28269, ICD-9-D-28264, ICD-9-D-28268, ICD-10-D-D571, ICD-10-D-D57812, ICD-10-D-D57412, ICD-10-D-D57212, ICD-10-D-D57411, ICD-10-D-D57811, ICD-10-D-D57211, ICD-10-D-D57419, ICD-10-D-D5780, ICD-10-D-D5740, ICD-10-D-D57819, ICD-10-D-D57219, ICD-10-D-D5720
Osteogenesis Imperfecta	ICD-9-D-75651, ICD-10-D-Q780
Thalassemia	ICD-9-D-28243, ICD-9-D-28244, ICD-10-D-D560, ICD-10-D-D561
Cirrhosis	ICD-9-D-5712, ICD-9-D-5715, ICD-10-D-K7030, ICD-10-D-K7031, ICD-10-D-K717, ICD-10-D-K7460, ICD-10-D-K7469
Cachexia	ICD-9-D-7994, ICD-10-D-R64
HIV/AIDS	ICD-9-D-042, ICD-10-D-B20

Androgenital Disorders	ICD-9-D-2552, ICD-10-D-E259, ICD-10-D-E250, ICD-10-D-E258
Psoriasis	ICD-9-D-6961, ICD-10-D-L400, ICD-10-D-L401, ICD-10-D-L404, ICD-10-D-L4050, ICD-10-D-L408, ICD-10-D-L409
Hypopituitarism	ICD-9-D-2532, ICD-10-D-E230
History of Pathologic Fracture	ICD-9-D-V1351, ICD-10-D-Z87311
<b>Other</b>	
Osteoporosis	ICD-9-D-73300, ICD-9-D-73301, ICD-9-D-73302, ICD-9-D-73303, ICD-9-D-73309, ICD-10-D-M810, ICD-10-D-M818, ICD-10-D-M816
Vitamin D Deficiency	ICD-9-D-2689, ICD-10-D-E559

**Table A.2:** Codes for DXA scans & osteoporosis pharmacotherapy

Criteria	Code(s)
DXA Scans	CPT-77080, CPT-77081
Aledronate	GENERIC_DRUG-ALENDRONATE_SODIUM GENERIC_DRUG-ALENDRONATE_SODIUM/VITAMIN_D3
Risedronate	GENERIC_DRUG-RISEDRONATE_SOD/CALCIUM_CARB GENERIC_DRUG-RISEDRONATE_SODIUM
Ibandronate	GENERIC_DRUG-IBANDRONATE_SODIUM
Zoledronic Acid	GENERIC_DRUG-ZOLEDRONIC_AC/MANNITOL/0.9NACL GENERIC_DRUG-ZOLEDRONIC_ACID GENERIC_DRUG-ZOLEDRONIC_ACID/MANNITOL&WATER GENERIC_DRUG-ZOLEDRONIC_ACID/MANNITOL-WATER
Raloxifene	GENERIC_DRUG-RALOXIFENE_HCL
Denosumab	GENERIC_DRUG-DENOSUMAB
Teriparatide	GENERIC_DRUG-TERIPARATIDE
Abaloparatide	GENERIC_DRUG-ABALOPARATIDE
Vitamin D supplements	GENERIC_DRUG-CALCITRIOL GENERIC_DRUG-CHOLECALCIFEROL_(VITAMIN_D3) GENERIC_DRUG-ERGOCALCIFEROL_(VITAMIN_D2)
Calcium supplements	GENERIC_DRUG-CALCIUM_CITRATE/VITAMIN_D3 GENERIC_DRUG-CALCIUM_CARBOONATE/VITAMIN_D2 GENERIC_DRUG-CALCIUM_CARBOONATE/VITAMIN GENERIC_DRUG-CALCIUM_CARBOONATE/MULTIVITAMIN GENERIC_DRUG-ASPIRIN/CALCIUM_CARBOONATE/M GENERIC_DRUG-CALCIUM_CARBOONATE GENERIC_DRUG-CALCIUM_GLUCONAT GENERIC_DRUG-CALCIUM_CARB_LACTATE/VIT_D3 GENERIC_DRUG-CALCIUM_LACTATE

## Appendix B: Supplemental Pharmacotherapy Claims Data

**Table B.1:** Most common pharmacotherapy claims after the primary fragility fracture

Generic Drug Code <sup>1</sup>	Patients	Total Claims	Average Days RX <sup>2</sup>	Average Copay <sup>2</sup>
ALENDRONATE_SODIUM	1,416	7,774	46.87	\$4.98
ERGOCALCIFEROL_(VITAMIN_D2)	1,262	4,216	45.54	\$7.49
CHOLECALCIFEROL_(VITAMIN_D3)	486	1,713	39.45	\$3.83
IBANDRONATE_SODIUM	268	1,343	49.43	\$25.21
CALCIUM_CARBONATE/VITAMIN_D3	197	668	38.92	\$3.05
RISEDRONATE_SODIUM	178	929	43.48	\$38.59
CALCIUM_CARBONATE	147	465	34.14	\$4.11
TERIPARATIDE	117	872	32.89	\$104.81
DENOSUMAB	104	176	109.42	\$118.46
CALCITRIOL	61	381	41.1	\$6.82
RALOXIFENE_HCL	56	247	52.13	\$29.55
CALCIUM_CITRATE/VITAMIN_D3	15	50	32.66	\$4.94

<sup>1</sup>Due to HIPPA concerns, PearlDiver does not provide exact patient counts for any queried group that amounts to less than 11 patients. Therefore, only drugs for which least 11 patients filed a claim are included here.

<sup>2</sup>Calculated directly in PearlDiver.