**Appendix Table 1**

**List of specialties classified as acute**

ANESTHESIOLOGY

CARDIAC INTENSIVE CARE UNIT

CARDIAC SURGERY

CARDIAC-STEP DOWN UNIT

CARDIOLOGY

DERMATOLOGY

EAR, NOSE, THROAT (ENT)

ENDOCRINOLOGY

EPILEPSY CENTER

GASTROENTEROLOGY

GEM ACUTE MEDICINE

GEN MEDICINE (ACUTE)

GENERAL SURGERY

GENERAL(ACUTE MEDICINE)

HEMATOLOGY/ONCOLOGY

INTERMEDIATE MEDICINE

MEDICAL ICU

MEDICAL STEP DOWN

METABOLIC

NEUROLOGY

NEUROSURGERYOB/GYN

OPHTHALMOLOGY

ORAL SURGERY

ORTHOPEDIC

PERIPHERAL VASCULAR

PLASTIC SURGERY

PODIATRY

PROCTOLOGY

PULMONARY, NON-TB

PULMONARY, TUBERCULOSIS

STROKE UNIT

SURGICAL ICU

SURGICAL STEPDOWN

TELEMETRY

THORACIC SURGERY

TRANSPLANTATION

UROLOGY

VASCULAR

z GEM ACUTE MEDICINE

zCARDIAC-STEP DOWN UNIT

zCARDIOLOGYzDERMATOLOGY

zENDOCRINOLOGY

zEPILEPSY CENTER

zGASTROENTEROLOGY

zGENERAL(ACUTE MEDICINE

zHEMATOLOGY/ONCOLOGY

zMETABOLIC

zNEUROLOGY

zNEUROSURGERY

zOPHTHALMOLOGY

zORTHOPEDIC

zPERIPHERAL VASCULAR

zPODIATRY

zPROCTOLOGY

zPULMONARY, NON-TB

zPULMONARY, TUBERCULOSI

zSTROKE UNIT

zSURGICAL ICU

zTELEMETRY

zUROLOGY

ZZPULMONARY DISEASE

**Appendix Table 2**

**List of topographies included**

|  |
| --- |
| ARTERIAL BLD |
| ARTERIAL BLOOD |
| BLOOD |
| BLOOD - SM |
| BLOOD (SEND) |
| BLOOD (VENOUS) |
| BLOOD & CSF |
| BLOOD & SERUM |
| BLOOD FRANCISCAN |
| BLOOD MIXED ART/VENOUS |
| BLOOD UNSPECIFIED |
| BLOOD VENOUS |
| BLOOD, ARTERIAL |
| BLOOD, OTHER CELLS |
| BLOOD, VENOUS |
| BLOOD, WHOLE |
| BLOOD,CAPILLARY |
| BLOOD\* |
| BLOOD/WHOLE |
| BODY AS A WHOLE |
| CATHETER SITE |
| CC SERUM |
| CENTRAL LINE |
| CSF & BLOOD |
| CSF & SERUM |
| CSF + RED TOP SERUM |
| CSF + SERUM |
| CSF AND SERUM |
| CSF/SERUM |
| CSF&SERUM |
| CSF+SERUM |
| MEDIASTINAL ARTERY |
| MIXED VEN/ART BLD |
| MIXED VENOUS |
| MIXED VENOUS BLOOD |
| MOFH BLOOD |
| MOFH SERUM |
| PERIPHERAL VENOUS BLOOD |
| PLAS |
| PLASMA |
| PLASMA GREEN |
| PLATELET POOR PLASMA |
| SERUM & CSF |
| SERUM AND CSF |
| SERUM FRANCISCAN |
| SERUM-TROUGH |
| SERUM/CSF |
| SERUM&CSF |
| ST.JAMES BLOOD |
| ST.JAMES SERUM |
| URINE/SERUM |
| VENOUS BLD |
| VENOUS BLOOD |
| WHOLE BLOOD |
| Whole Blood |
| WHOLE BLOOD-B |
| WS-BLOOD |
| WS-PLASMA |

**Appendix Table 3**

**LOINC Codes**

|  |  |
| --- | --- |
| **Lab** | **LOINC codes** |
| Albumin | '43712-9','1751-7','61151-7','61152-5','54347-0',  '62235-7','62234-0','1747-5' |
| Bilirubin | '14631-6','1975-2','42719-5','54363-7' |
| Creatinine | '2160-0','44784-7','35203-9','14682-9' |
| Hemoglobin | '20509-6','25433-4','4635-9','55457-6','59260-0',  '717-9','718-7','720-3','721-1' |
| Sodium | '2947-0','2951-2','44783-9','51419-0' |
| WBC | '26464-8','49498-9','6690-2','804-5' |

**Test names**

|  |  |  |
| --- | --- | --- |
| **Albumin** | | |
| 'ALBUMIN',  'ALBUMIN\*IA',  'ALBUMIN\*NE',  'ALB,PE(5/14/03-1/21/04)',  'ALB',  'ALB (b)',  'ALB,PE(5/14/03-1/21/04)',  'ALBUMIN',  'ALBumin',  'Albumin',  'ALBUMIN - PE',  'ALBUMIN (3/04 - 11/08)',  'ALBUMIN (Blood/Fluids V.A.)',  'ALBUMIN (d/c 5/13/05)',  'ALBUMIN (FS)',  'ALBUMIN (FV)',  'ALBUMIN (gm)',  'ALBUMIN (LX)',  'ALBUMIN (MV)',  'ALBUMIN (P.E.)',  'ALBUMIN (PARAGON)',  'ALBUMIN\*IA', | 'ALBUMIN (PLASMA)',  'ALBUMIN (Q)',  'ALBUMIN (QUEST)',  'ALBUMIN (Ref.Lab)',  'ALBUMIN (SERUM)',  'ALBUMIN (S-HEM)',  'ALBUMIN (SL)',  'ALBUMIN (SY)',  'ALBUMIN (V2)',  'ALBUMIN ,Blood',  'ALBUMIN 10/16/06 OLD',  'ALBUMIN BCG (PRE 1/6/03)',  'Albumin mg/dL',  'ALBUMIN -SERUM',  'ALBUMIN thru 3/2/2004',  'ALBUMIN THRU 6/26/06',  'ALBUMIN-% -',  'ALBUMIN(BMT)',  'ALBUMIN(HITA)(INACT4/2003)',  'ALBUMIN-------(PSHCS)',  'ALBUMIN(SERA/PLASMA)',  'ALBUMIN\*', | 'ALBUMIN\*NE',  'ALBUMIN, PLASMA',  'ALBUMIN,(serum/plasma)',  'ALBUMIN,SERUM',  'ALBUMIN-FL',  'BR-ALBUMIN',  'C-ALBUMIN-CBOC',  'M-ALBUMIN','MRD-ALBUMIN',  'P-ALBUMIN(I)',  'SERUM ALBUMIN',  'SERUM ALBUMIN (MS PR)',  'SERUM ALBUMIN\* (SY)',  'SO-ALBUMIN',  'Z++ALBUMIN-OUTSIDE LAB',  'ZALBUMIN','zALBUMIN (DC 1-12)',  'zALBUMIN (NA) dc"d 10/06',  'ZSJ-ALBUMIN(DC"D 5-10)',  'ZZALBUMIN',  'zzALBUMIN-PEN',  'zzz ALBUMIN(BRAD)',  'ZZZALBUMIN (NOT IN USE)' |

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| **Bilirubin** | | |
| 'TOT. BILIRUBIN',  'BILIRUBIN,TOTAL',  'BILIRUBIN,TOTAL\*NE',  'TOTAL BILIRUBIN\*IA',  'TOTAL BILIRUBIN',  'BILI TOTAL',  'BILIRUB.,TOT',  'BILIRUBIN',  'Bilirubin',  'BILIRUBIN TOTAL',  'BILIRUBIN TOTAL, SERUM',  'BILIRUBIN, TOTAL',  'BILirubin, total',  'BILIRUBIN, TOTAL-----',  'BILIRUBIN, TOTAL,Blood',  'BILIRUBIN,TOTAL','BILIRUBIN,TOTAL (4/04-11/08)',  'BILIRUBIN,TOTAL (V2)',  'BILIRUBIN,TOTAL -LX',  'BILIRUBIN,TOTAL thru 3/2/2004',  'BILIRUBIN,TOTAL(ACL)', | 'BILIRUBIN,TOTAL\*NE',  'BR-TOTAL BILI','CBILI',  'C-BILIRUBIN, TOT-CBOC',  'COOK TOTAL BILIRUBIN',  'LEG T BILI',  'MRD-T.BILIRUBIN',  'POC Bili Confirm',  'P-TOTAL BILIRUBIN(I)',  'T.BILI',  'T.BILIRUBIN',  'TBIL',  'TBIL 10/16/09 OLD',  'TOT BILIRUBIN',  'TOT. BILIRUBIN',  'TOT. BILIRUBIN THRU 6/26/06',  'TOT. BILIRUBIN(BMT)',  'TOT.BILIRUBIN',  'TOTAL BILIRUBIN',  'TOTAL BILIRUBIN (CO,MC)',  'TOTAL BILIRUBIN (CX)',  'TOTAL BILIRUBIN (FS)', | 'TOTAL BILIRUBIN (FV)',  'TOTAL BILIRUBIN (MV)',  'TOTAL BILIRUBIN (Ref.Lab)',  'TOTAL BILIRUBIN(EK)(ENDED)',  'TOTAL BILIRUBIN\*',  'TOTAL BILIRUBIN, PLASMA',  'Z++BILIRUBIN,TOTAL-OUTSIDE LAB',  'zBILIRUBIN, TOTAL (DC 1-12)',  'ZSJ-BILI,TOTAL(DC"D 5-10)',  'ZTOT. BILIRUBIN',  'zzTOTAL BILIRUBIN-PEN\*',  'zzz BILIRUBIN,TOTAL(BRAD)',  'MHA TP (TP-PA)',  'MHA-TP',  'MHA-TP (DC"D 09/02/08)',  'MHA-TP (dc"d 4/11/12)',  'MHA-TP (FTA)',  'MHATP (LEX)',  'MHATP (TP-PA)',  'TOT BILIRUBIN(DCed 2.1.15' |

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| **Creatinine** | | |
| 'CREATININE',  '(E)CREATININE,SERUM',  'CREAT SERUM\*NE',  'CREATININE\*IA',  'CREATININE\*NE',  'ANCILLARY I-STAT CREATININE',  '\*CREATININE',  '\*CREATININE mg/dL',  '~CREATININE',  '~CREATININE-mg/dL',  'ANCILLARY I-STAT CREATININE',  'Bld Creatinine (mg/dL)',  'BR-CREATININE',  'C-CREATININE-CBOC',  'COMPUTED CREATININE',  'COOK CREATININE',  'CREAT (for EGFR) 6/7/05-6/20/05',  'CREAT SERUM\*NE',  'CREAT(mM)',  'CREAT, MG/DL (BU)','CREAT.',  'CREAT.,SERUM (DO NOT USE 4/11/00)',  'CREATININE',  'CREatinine',  'Creatinine',  'CREATININE (BLOOD)',  'CREATININE (C0NC)',  'CREATININE (CX)',  'CREATININE (DOES NOT CONTAIN eGFR)',  'CREATININE (FS)',  'CREATININE (FS)\*INACT(1-10-09)',  'CREATININE (FV)',  'CREATININE (FV)\*INACT(1-10-09)',  'CREATININE (INACTIVATED 030110)',  'CREATININE (MINOT AFB)DC 6/8/10',  'CREATININE (MV)',  'CREATININE (MV)\*INACT(12-28-07)', | 'CREATININE (PRIOR TO 8/24/05)',  'CREATININE (Ref.Lab)',  'CREATININE (SERUM)',  'CREATININE (SERUM/PLASMA)',  'CREATININE (SINGLE TEST)',  'CREATININE (STAT LAB)',  'CREATININE (thru 11/08)',  'CREATININE (TOPC)',  'CREATININE (V2)',  'CREATININE {St. George}',  'CREATININE 10/16/06 OLD',  'CREATININE MG/DL',  'CREATININE prior to 2/7/06',  'Creatinine Serum Result',  'CREATININE thru 3/2/2004',  'CREATININE(\*SERUM\*)',  'CREATININE(BMT)',  'CREATININE(DOES NOT INCLUDE EGFR)',  'CREATININE(FB)',  'CREATININE(LUF)',  'CREATININE(PRE 3/23/09)',  'CREATININE(PRIOR TO 081012)',  'CREATININE(serum/plasma)',  'CREATININE(spot ua or fluids)',  'CREATININE\*','CREATININE\*IA',  'CREATININE\*NE',  'CREATININE, SERUM',  'CREATININE, BLOOD',  'CREATININE, PLASMA',  'CREATININE, SERUM',  'CREATININE, Serum',  'CREATININE, SERUM OR PLASMA',  'CREATININE,Blood',  'CREATININE,LABCORP',  'CREATININE,PLASMA (in mg/dL)',  'CREATININE,SERUM',  'CREATININE,SERUM/PLASMA',  'CREATININE,VERIFY',  'CREATININE (POC)', | 'CREATININE~disc6/09',  'CREATININE2',  'CREATININE--------CCO',  'CREATININE-e',  'CREATININE-FL',  'CREATININE----------O',  'CREATININE-PAK',  'CREATININE-SENDOUT',  'CREATININE-SENDOUT-UO','CREATININE-SERUM',  'eCREATININE',  'HOPC-CREATININE',  'iCREATININE',  'I-STAT CREA',  'I-STAT CREATININE (MA-EV)',  'ISTAT-CREATININE',  'Lamar Creatinine (serum)',  'LC-CREATININE',  'LC-CREATININE (MG/DL or G/L)',  'OB-CREATININE','P-CREATININE',  'QST-CREATININE--O',  'SER. CREATININE',  'SERUM CREAT (CrCl)',  'SERUM CREAT.(CL.)',  'SERUM CREATININE',  'Serum Creatinine',  'Serum Creatinine (4/30/08)',  'TOTAL CREATININE',  'WB CREATININE',  'Z++CREATININE-OUTSIDE LAB',  'ZCREATININE',  'zCREATININE - (DC 1-12)',  'zCREATININE (CO,MC)',  'zSEND OUT CREATININE ...',  'ZZCREATININE',  'ZZ-CREATININE (b. <8-10-04)',  'zzCREATININE-PEN',  'zzz CREATININE(BRAD)',  'ZZZCREATININE (CBOC)',  'ZZZCREATININE (DO NOT USE 10/25/07)' |

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| **Hemoglobin** | | |
| 'HGB',  'ZHGB (RETIRED 6/29/05)',  'ISTAT HGB',  '.HGB (MINOT AFB)DC 6/8/10',  'A HGB',  'C-HGB-CBOC',  'HB (ctHb)',  'HB (HGB)',  'HB (tHb)',  'HgB',  'Hgb',  'hgb','HGB (AA)',  'HGB (FV)',  'HGB (HB)',  'HGB (MV)',  'HGB (PRE 6/30/05)',  'HGB (thru 10/06/09)',  'HGB (V2)',  'HGB {Reference Lab}',  'HGB {St. George}',  'HGB POC (BU)',  'HGB-(NANTICOKE)',  'HGB(PRE-2/2/12)',  'HGB\*',  'HEM1W - TOTAL  'HEMOGLOBIN', | 'HGB,Blood',  'HGB2',  'ISTAT-HGB #',  'LEG HGB',  'MN HGB',  'NEW HGB',  'OB-HGB',  'o-HGB',  'POC HGB',  'Q-HGB DC"D',  'S HGB',  'TOTAL HGB',  'TOTAL HGB-----------O',  'ZHGB (RETIRED 6/29/05)',  'ZHS HGB',  'ZSJHGB(DC"D 5-10)',  'zzz HGB(BRAD)',  'ZZZPLASMA-HGB',  'BG HGB',  'BECKMAN HGB',  'CELLULAR HGB, RETIC',  'COOK HEMOGLOBIN',  'Hemoglobin','HEMOGLOBIN-----------',  'HEMOGLOBIN (LABCORP)', | 'hemoglobin other',  'HEMOGLOBIN TOTAL',  'HEMOGLOBIN, OTHER (SP HEM)-BK',  'HEMOGLOBIN, PLASMA (fb/SK)',  'iHEMOGLOBIN (new)',  'I-STAT HEMOGLOBIN',  'POC-HEMOGLOBIN (HB)',  'TOTAL HEMOGLOBIN',  'Z++HEMOGLOBIN-OUTSIDE LAB',  'THB',  'THb','tHB',  'tHb','tHb (R)',  'tHb(FEM)',  'tHb(PA)',  'tHb(RA)',  'tHb(RV)',  'z\*INACT\*HGB (5-15-09)',  'HEMOGLOBIN OTHER',  'TOTAL HEMOGLOBIN (BGL4)',  'HEMOGLOBIN (POC)',  'HEMOGLOBIN [BK]',  HEMOGLOBIN' |

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| **Sodium** | | |
| 'SODIUM',  'SODIUM\*IA',  'SODIUM\*NE',  'SODIUM (O.R.)',  'ISTAT SODIUM',  'ANCILLARY SODIUM',  'AT- SODIUM',  'AT- SODIUM \*\*\*DO NOT ORDER\*\*\*',  'BR-SODIUM',  'COMPUTED SODIUM',  'COOK SODIUM',  'C-SODIUM-CBOC',  'HOPC-SODIUM',  'iSODIUM (new)',  'ISTAT SODIUM',  'I-STAT SODIUM',  'ISTAT-SODIUM',  'LC-SODIUM',  'OB-SODIUM',  'POC SODIUM',  'POC-SODIUM (NA)', | 'P-SODIUM',  'SOD',  'SODium',  'Sodium',  'SODIUM (BLOOD)',  'SODIUM (CO,MC)',  'SODIUM (CX)',  'SODIUM (FS)',  'SODIUM (FV)',  'SODIUM (I-STAT)',  'SODIUM (LAB USE ONLY)',  'SODIUM (MINOT AFB)DC 6/8/10',  'SODIUM (MV)',  'SODIUM (O.R.)',  'SODIUM (Ref.Lab)',  'SODIUM (SERUM/PLASMA)',  'SODIUM (Serum/Plasma)',  'SODIUM (thru 11/08)',  'SODIUM (TOPC)',  'SODIUM (V2)',  'SODIUM {St. George}', | 'SODIUM 10/16/06 OLD',  'SODIUM POC (BU/BH)',  'SODIUM -SERUM','SODIUM thru 3/2/2004',  'SODIUM--------------O',  'SODIUM-WHOLE BLOOD---',  'Z++SODIUM-OUTSIDE LAB',  'ZSJSODIUM(DC"D 5-10)',  'ZSODIUM',  'zSODIUM (DC 1-12)',  'zzSODIUM-PEN',  'zzz SODIUM(BRAD)',  'BG SODIUM',  'CVICU-SODIUM',  'Na',  'Na, mM/L',  'Na+(WB) (R)',  'Na+---OR',  'NA+r',  'NAbFeron Antibody Test',  'Na-iSTAT',  'OR Na+',  'ATS NA+' |

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| **White blood cell** | | |
| 'WBC',  'WBC (REFERENCE LAB)',  'ZWBC (RETIRED 6/29/05)',  '.WBC (MINOT AFB)DC 6/8/10',  'AUTO WBC','CBC/WBC EX',  'COOK WBC',  'CORRECTED WBC',  'CORRECTED WBC-------0',  'C-WBC-CBOC',  'HOPC-WBC',  'LEG WBC',  'MH WBC (WET PREP)',  'MN WBC',  'NAVY STAT WBC',  'NEW WBC',  'OB-WBC',  'Q-WBC DC"D',  'T-CELL WBC',  'TOTAL WBC',  'Total WBC',  'Total WBC Count (AML)',  'Wbc',  'WBC------------------',  'WBC -', | 'WBC - SCAN Dc"d 1-21-08',  'WBC (AA)',  'WBC (AUTOMATED)',  'WBC (AUTOMATED) WR',  ‘WBC (BEFORE 5/9/06)',  'WBC (DO NOT USE)',  'WBC (FCM)',  'WBC (FOR ANC CALC.)',  'WBC (FV)',  'WBC (LABCORP)',  'WBC (MV)',  'WBC (ORS)',  'WBC (REFERENCE LAB)',  'WBC (RESEARCH PANEL) (TO 6/13/05)',  'WBC (thru 10/6/09)',  'WBC (V2)',  'WBC {Reference Lab}',  'WBC {St. George}',  'WBC AUTO',  'WBC AUTO -',  'WBC COUNT',  'WBC COUNT (K/uL)',  'WBC Dc"d 1-21-08', | 'WBC SCAN Dc"D 4-9-09',  'WBC(CBOC)',  'WBC(EST)',  'WBC(PRE-2/2/12)',  'WBC\*',  'WBC/uL',  'WBC2',  'WBC-auto (V1FC)',  'WBC--------------CSFO',  'WBC-FL',  'WBC"S',  'Z++WBC-OUTSIDE LAB',  'ZHS WBC',  'ZSJWBC(DC"D 5-10)',  'ZWBC (RETIRED 6/29/05)',  'zzz WBC(BRAD)',  'WBC (for CD4/CD8)',  'z\*INACT\*WBC (4-1-10)',  'ZSJUAWBC(DC"D 5-10)',  'WHITE BLOOD CELLS Thru 2/12/07',  'TOTAL WHITE BLOOD COUNT',  'WHITE CELL COUNT',  'WHITE CELLS, TOTAL' |