Requirements for Lab Testing – FHIR

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| --- | --- | --- | --- | --- | --- |
| Testing | Order | Components | Specimens  | Results | Special Considerations |
| Comprehensive Metabolic Panel | One Order | 14 components with 3 calculated/estimated results | 1 tube serum | 14 components with 3 calculated/estimated results | All typically reported together |
|  | * 1 DataElement (D1) that defines the LOINC/CPT/Local code for the CMP and identifies all of the components expected for that test
* 1 DiagnosticRequest (O1) with a LOINC/CPT and/or local code for the CMP, status=active, authorDate = today, priority=Routine, time window could be implicit or explicit – e.g. not before Jan 1, not after Feb 28
* 1 Task (T1) with code of “please fulfill” pointing to O1 with target performer of lab, no time period information unless you want to request fulfillment in a specific timeframe distinct from the “authorized” time on the order. (Task timing must fall within time period on O1)
	+ Eventually task gets a status of accepted, then in progress
* 17 DiagnosticRequests + 1 ProcedureRequest created by lab “in fulfillment of” O1 (for individual tests + specimen draw) and/or create 17 + 1 tasks to track fulfillment of steps to draw specimen and perform tests
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| Wellness Profile | One Order | 5 panel test with 41 detailed results | Up to 4 specimens | Components + calculated results | May report only partial results if unable to perform all panel tests |
|  |  |
| ACTH Stimulation | One Order | 3 components baseline, 30 min and 60 min post stimulation  | 3 specimens | Result of each test + time for each draw post stimulation | All must be performed  |
|  |  |
| Creatinine Clearance | One Order | Two tests + demographics + volume + collection time+ calculation  | 1 serum, 1 urine timed | Serum and urine creatinine + calculated results (based on Ht/Wt/BSA) sample condition (up to 12 “results” | Both specimens must be received and demographics supplied |
|  |  |
| BCRA with Reflex | Order one test | Based on results of BRCA 1 and 2 sequencing may reflex up to 9 additional tests | 4 ml whole blood EDTA | Known or likely pathogenic mutations unknown variants | Perform all to provide results and interp --  |
|  |  |
| Culture, Aerobic Bacteria | One Order | Culture, Identification of bacteria, susceptibility  | One specimen (many different types) | Bacteria ID and susceptibilities | Identification and susceptibility are reflex – will provide preliminary results |
|  |  |
| Tissue Pathology | One order  | Add specimen treatment, stains, himmunochemistry, genetic testing as necessary | One to many specimens  | Diagnosis, stains, immunochem results, genetic results | Performed by multiple people and potentially at multiple locations partial reporting will most likely occur in complex cases |
| WBC standing order  |  |  |  |  |  |

Issues related to billing – may bill Medicare only on completion of all tests ordered on a panel

Example Panels:

1. Acute hepatitis
2. Basic Metabolic
3. Comprehensive Metabolic
4. Electrolyte
5. Hepatic Function
6. Lipid Screen
7. Obstetrics
8. Renal Function

Specimen attributes

Type

Container

Anticoagulant

Minimum Volume

Alternative specimens

Transport Temperature

Specimen Stability

Reject Criteria

Recommend attributes with order:

1. May be combined with other orders (Could this test be done on an existing specimen)
2. May substitute result from same test (on same day)
3. Partial reporting allowed
4. Specimen may be used for other testing

Culture, Aerobic Bacteria

CPT Code(s) 87070

Includes

If culture is positive, identification will be performed at an additional charge (CPT code(s): 87077 or 87140 or 87143 or 87147 or 87149). Antibiotic susceptibilities are only performed when appropriate (CPT code(s): 87181 or 87184 or 87185 or 87186).

Preferred Specimen(s)

Superficial wounds, skin, IV catheter tip. Collect specimen using culture swab transport device. Indicate source of specimen on both the requisition and specimen transport device. See Microbiology Specimen Collection section of the Specimen Collection Guide for Specific instructions.

For deep wounds requiring culture for both aerobic and anaerobic organisms order Culture, Wound, Deep (41327T) and submit specimen in Port-ACul vial tube. Submit exudate in in sterile leak-proof container or BD Vacutainer tube catalogue #366703. Do not use a barrier tube.

Minimum Volume one transport swab

Alternative Specimen(s)

Skin biopsy

Transport Container

Transport swab or sterile leak-proof container

 Transport Temperature

Room temperature

Specimen Stability

Room temperature: 48 hours

Refrigerated: 48 hours

Frozen: Unacceptable

Deliver to laboratory as soon as possible

Reject Criteria

Received frozen • Specimens submitted in formalin • Dry swabs • Expired transport media • Specimens >48 hours old

Methodology

Bacterial Culture, Aerobic

Includes routine isolation and identification procedures, antibiotic susceptibility testing when appropriate

Performing Laboratory

Setup Days

Monday-Sunday

Report Available

Negatives reported in 2 days

Clinical Significance

Aerobic bacteria cause a variety of human infections. Proper specimen collection and transport, media and incubation are important criteria for the recovery of aerobes. The primary aerobic bacterial agents of skin and tissue infections include S. aureus, P. aeruginosa, members of the enterobacteriaceae, and beta-hemolytic streptococci. The results of aerobic cultures assist the clinician with diagnosis and treatment of patients with bacterial infections. Proper interpretation of culture results is dependent on specimen source and known pathogenicity of the isolated organism.

LOINC®' Code(s)

NOTE: The codes listed in the table below are not orderable Test Codes.

Result

Code Result Name LOINC Code Component Name

60100253 CULTURE WOUND 634-6 Bacteria identified

60100254 CULTURE WOUND 634-6 Bacteria identified

60100255 CULTURE WOUND 634-6 Bacteria identified

60100256 CULTURE WOUND 634-6 Bacteria identified

60100258 CULTURE WOUND 634-6 Bacteria identified

60100259 CULTURE WOUND 634-6 Bacteria identified

60100260 CULTURE WOUND 634-6 Bacteria identified

60200062 SOURCE 31208-2 Specimen source

6320 CULTURE,WOUND 17915-0 Bacteria identified