Algorithm for Ebola virus disease laboratory diagnosis

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                                    ┌──────────────────────────┐
                                    │ Patient Under Investigation │─────── Clinical guidance
                                    │           (PUI)            │
                                    └──────────────────────────┘
                                                 │
           ┌───────────────────────────────┐    │
Handling blood ── │ Malaria and other HF:        │ ◄──┤
specimens         │ aetiological investigations  │
                  │ according to risk assessment │
                  └───────────────────────────────┘
                                                 │
                                                 ▼
                                    For guidance, contact EU QUANDHIP
                                    coordinator or HSC member
                                    ◇ Blood specimen
          Negative ──────────────── sent to BSL3 or BSL4 laboratory ──── Positive
                  │                  for Ebola virus nucleic acid
                  │                  detection (PCR) ◇
┌───────────────────────┐ │                                    │                          ┌──────────────────┐
│ Request second sample │ │                                    ▼                          │ Request second   │
│                       │ │         ◇ Sample taken within              ◇ Confirmation by  │ sample           │
CDC guidance ──│ at day 3 after symptom │          48 hours after symptom        sequencing of      └──────────────────┘
│ onset                 │  Yes     onset                    Positive ── amplicon or second PCR ─── Negative/
│ OR                    │ ◄────    OR                                  assay on different           inconclusive
│ after 24h for a patient│         Patient with high      ── No        genomic targets ◇
│ with high-risk exposure│         risk exposure ◇              │               │
└───────────────────────┘                │                     │               ▼
                                          ▼                     ▼          ┌──────────────────┐
                                   ┌──────────────┐      ┌──────────────┐  │ EVD confirmed case│
                                   │ No EVD case  │      │ EVD confirmed │ │                  │
                                   └──────────────┘      │ case          │
                                                         └──────────────┘
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Patient Under Investigation (PUI) — Clinical guidance

Malaria and other HF: aetiological investigations according to risk assessment — Handling blood specimens

Blood specimen sent to BSL3 or BSL4 laboratory for Ebola virus nucleic acid detection (PCR) — For guidance, contact EU QUANDHIP coordinator or HSC member

Negative / Positive

Request second sample at day 3 after symptom onset OR after 24h for a patient with high-risk exposure — CDC guidance

Sample taken within 48 hours after symptom onset OR Patient with high risk exposure — Yes / No

Confirmation by sequencing of amplicon or second PCR assay on different genomic targets — Positive / Negative/inconclusive

Request second sample

No EVD case

EVD confirmed case