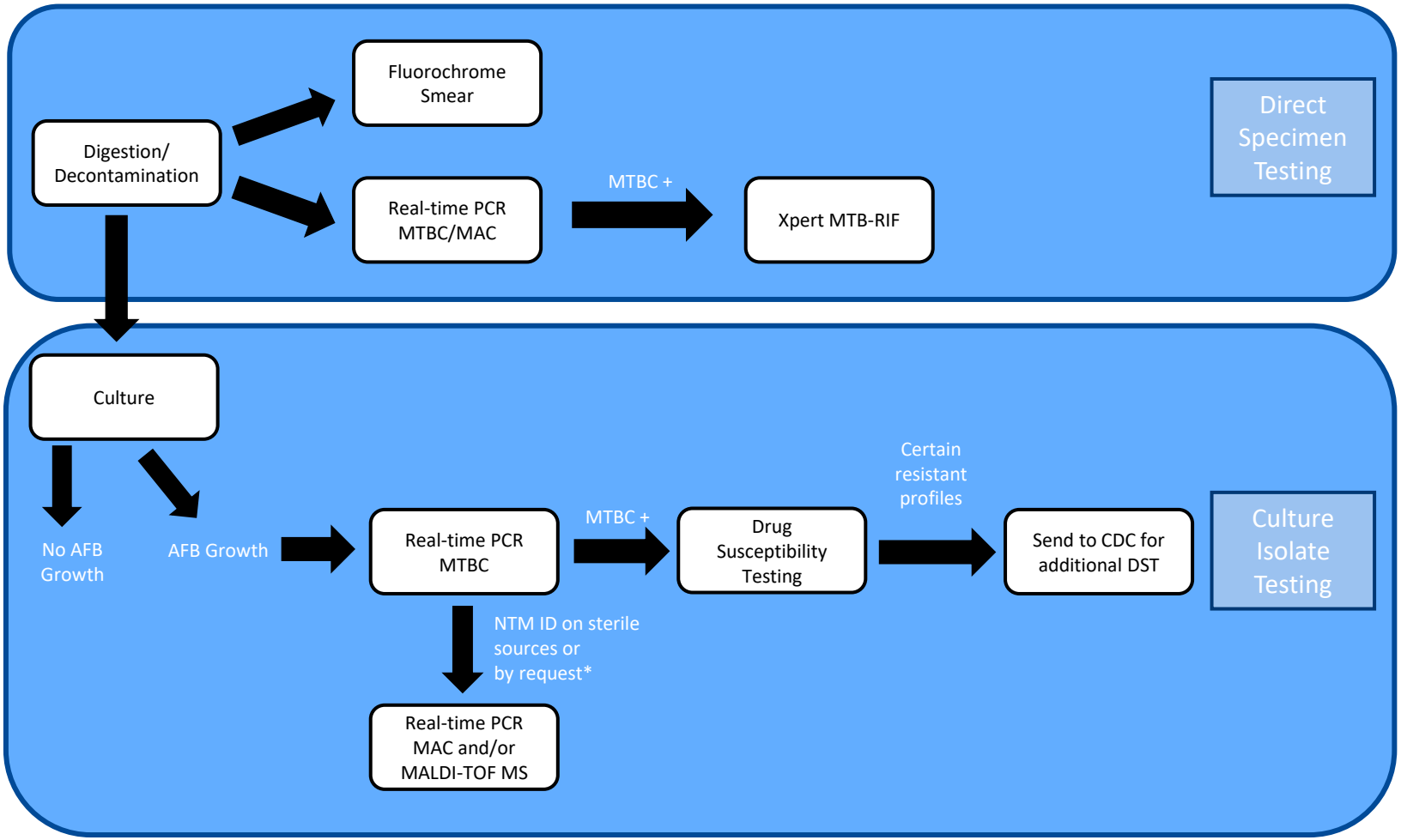
DCLS

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Mycobacteria/Tuberculosis Testing



*NTM identification may be performed for non-sterile sources by request from VDH TB Program and requires DCLS pre-approval for testing. Local health departments should email tuberculosis@vdh.virginia.gov with patient information and the reason for the request.

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Test	Schedule of Testing	Test Information
Digestion/ Decontamination	• Performed daily (Monday – Friday) • TAT: 24 hrs from specimen receipt	• Sputum: optimal volume 5 mL; store refrigerated (2-8°C); send to lab within 24 hours of collection • Contact lab for guidance on other sample types
Fluorochrome Smear	• Performed daily (Monday – Friday) • TAT: 24 hrs from specimen receipt	• Results: Negative; Positive (with quantitation)
Real-time PCR MTBC/MAC	• Performed daily (Monday – Friday) • TAT: 72 hrs (Direct testing) • Sputum only	• Direct testing performed on all patient samples unless previously positive MTBC sample; Culture testing to identify isolates • Results: MTBC Detected/Not Detected; MAC Detected/Not Detected • Positive Direct MTBC will reflex to Xpert MTB-RIF
Xpert MTB-RIF	• Performed daily as needed (Monday – Friday) • Sputum only	• Results: Rifampin Resistance Detected/Not Detected/Indeterminate • Not approved for pediatric patients (< 18 years); patients treated with anti-tuberculosis treatment for ≥ 3 days* • If resistance detected, will reflex to MDDR testing
Culture	• Read weekly • Negative cultures incubated for 6 weeks	• Real-time PCR MTBC performed to rule in/out MTBC ID on AFB+ cultures • Real-time PCR MAC and/or MALDI-TOF for ID of NTM (sterile sources and by request) • ID of MTBC will reflex to drug susceptibility testing
Drug Susceptibility Testing	• Performed twice per week • 4 - 21 days for results (from identification) • MGIT 960 method	• Results: RIPE, high INH, MOX Sensitive/Resistant • Certain resistant profiles will reflex to testing at CDC (indicated on preliminary report) • Performed on index MTBC isolate from each patient (subsequently 3 months from index collection date)
MALDI-TOF MS	• Performed as needed • NTM ID	• Preliminary or Final ID result

Color indicates Molecular Testing

MTBC: *Mycobacterium tuberculosis* complex; MAC: *Mycobacterium avium* complex; MDDR: molecular detection of drug resistance; AFB: acid-fast bacilli; ID: identification; MALDI-TOF: matrix-assisted laser desorption ionization – time of flight; NTM: Nontuberculous mycobacteria; RIPE: rifampin, low isoniazid, pyrazinamide, ethambutol; INH: isoniazid; MOX: moxifloxacin

*Samples that are not approved for the Xpert MTB-RIF testing may qualify to be tested for MDDR at CDC.
DCLS TB Laboratory (804)648-4480 ext.255

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