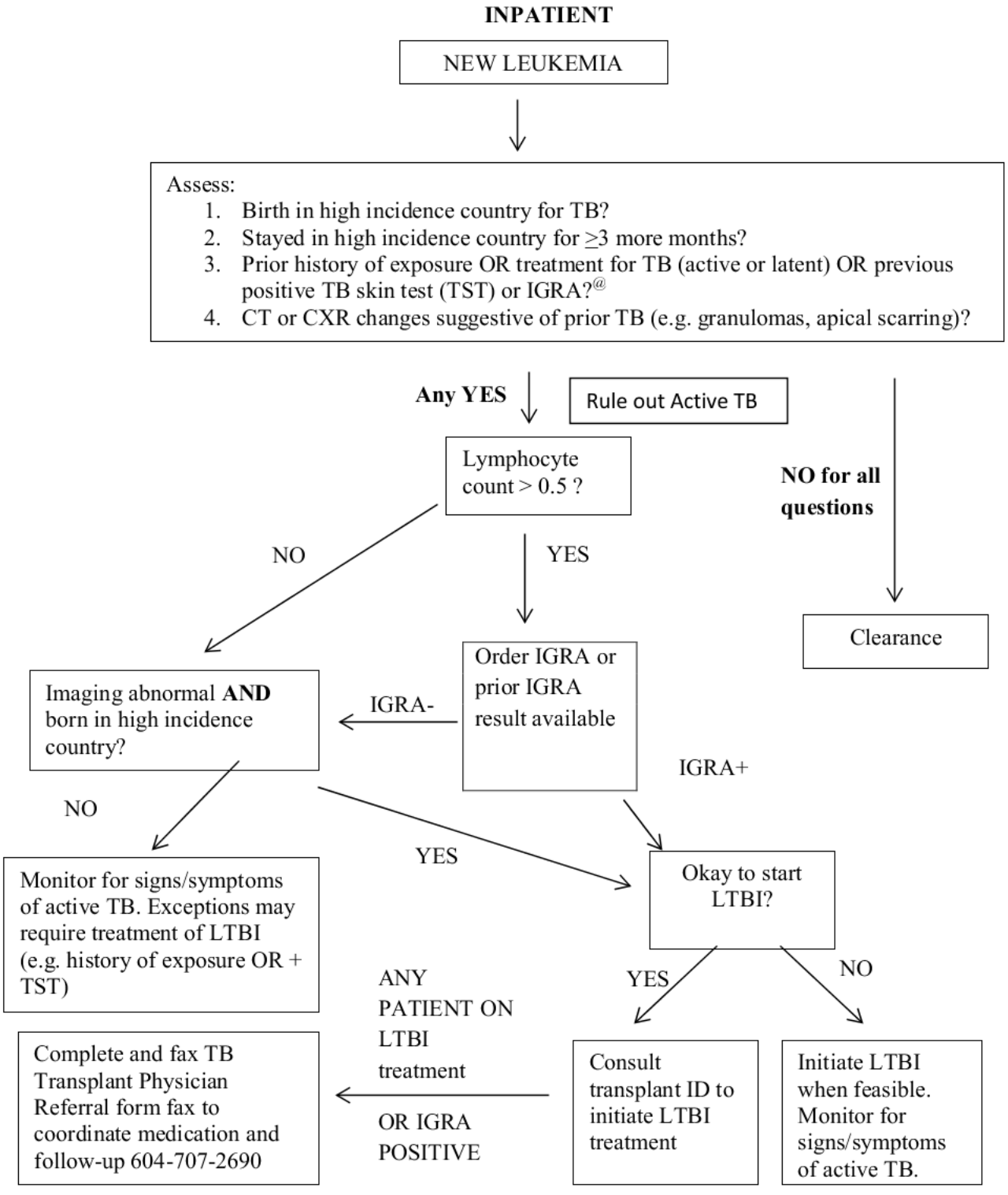
BMT/Transplant ID/TB Services
Version: January 18, 2019

Flowchart for TB – Acute Leukemia at VGH and pre-allogeneic/autologous BMT (L/BMT)



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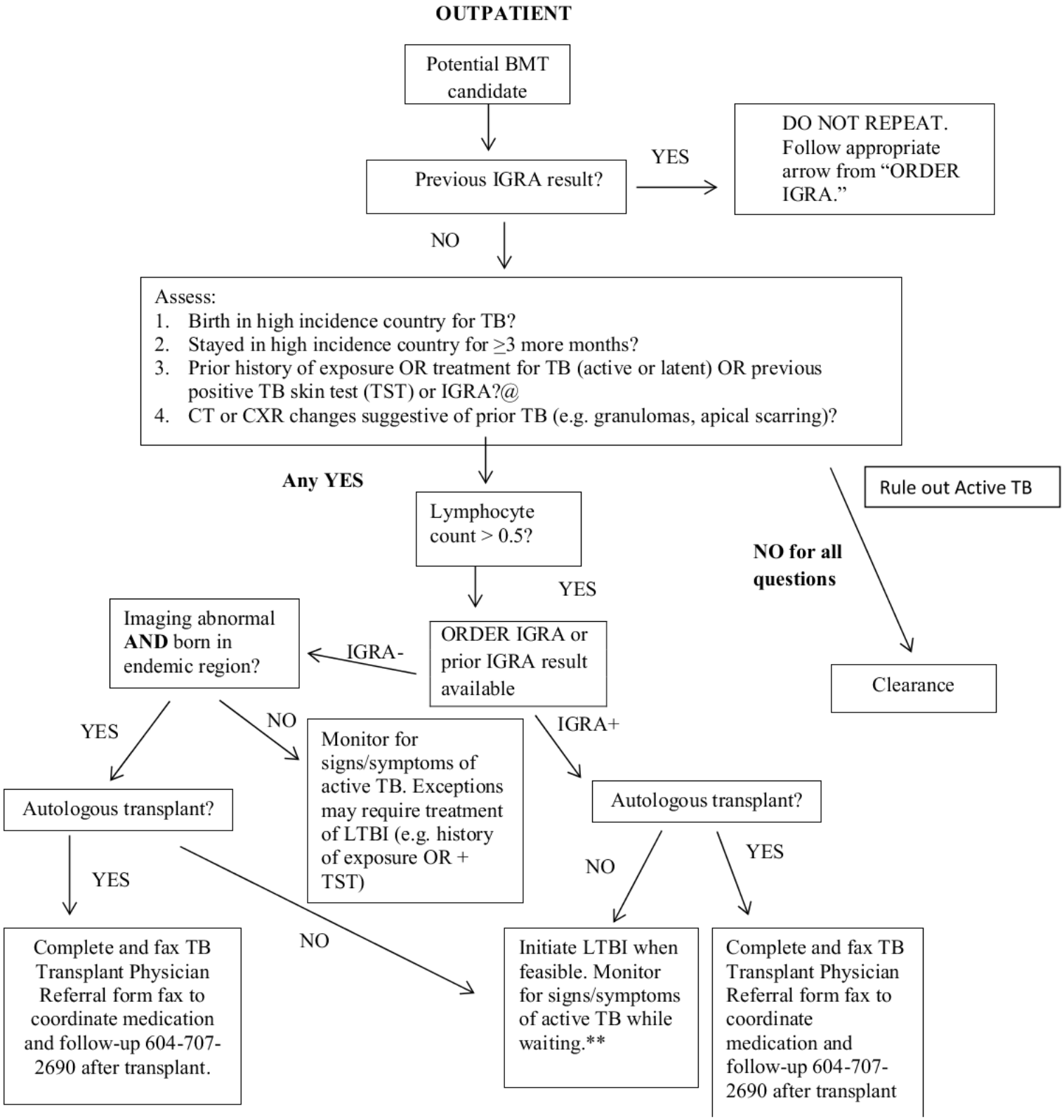

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BMT/Transplant ID/TB Services
January 18th, 2019

Policy on Pre-Transplant TB Screening for L/BMT Patients

INPATIENT

All new acute leukemia patients must undergo the following TB screening. The purpose of this screening is to identify patients with or at risk for TB infection, and initiate treatment to prevent active TB disease.

Assess whether the patient has any of the four possible TB risk factors:

1. Birth in high incidence country for TB*
2. Lived in or travelled to a high incidence country for ≥3 more months
3. Prior history of exposure, diagnosis OR treatment for TB (active or latent) OR previous positive TB skin test or IGRA
4. CT or CXR changes suggestive of prior TB (e.g. granulomas, apical scarring)

If the answer to all four questions is NO, then no further screening related to TB is required. Specifically, TST/IGRA testing is not recommended.

If the answer to any one question is YES, ensure that the patient has not had treatment for latent TB infection or active TB in the past. If they have, consult Transplant ID to determine whether treatment was adequate. If they have not been treated for TB, check CareConnect to ensure that they have not had an IGRA in the past. If they have, do NOT repeat the IGRA. Use that result. If they have not, then look at the lymphocyte count. If the lymphocyte count is ≥ 0.5, then perform an IGRA. If the IGRA is positive, assess whether the patient can initiate LTBI therapy based on drug interactions and liver function tests. If yes, consult Transplant ID to initiate LTBI treatment as an inpatient. If no, monitor for signs and symptoms of TB reactivation while waiting for a safe time to initiate LTBI therapy. Before initiating LTBI, repeat CXR and make sure patient does not have symptoms of active TB disease.

If the lymphocyte count is too low for an IGRA OR the IGRA is negative, assess whether the patient was born in a high incidence country AND has abnormal imaging. If both risk factors are present, assess whether the patient can initiate LTBI therapy based on drug interactions and liver function tests. If yes, consult Transplant ID to initiate medication as an inpatient. If no, monitor for signs and symptoms of TB reactivation while waiting for a safe time to initiate LTBI therapy. If patients are not foreign borne but have a history of exposure to TB or previous positive TB skin testing, consult Transplant ID to determine whether the patient needs treatment. For any other patient with only ONE risk factor, monitor for signs or symptoms of active TB.

At discharge from the inpatient unit, complete the TB Transplant Physician Referral form (attached) and fax to Provincial TB Services to coordinate medication and follow-up 604-707-2690. A referral form should be completed and faxed for any IGRA+ patient or patient on LTBI.

* High incidence is defined by TB Services as >40/100,000.
https://www.who.int/tb/country/data/profiles/en/

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OUTPATIENT (PRETRANSPLANT)

All BMT candidates should undergo TB screening. However, you should keep in mind that patients may have already been screened as an inpatient or in another context.

First, assess whether the patient has any of the four possible TB risk factors:

1. Birth in high incidence country for TB
2. Lived in or travelled to a high incidence country for >3 more months
3. Prior history of exposure, diagnosis OR treatment for TB (active or latent) OR previous positive TB skin test or IGRA
4. CT or CXR changes suggestive of prior TB (e.g. granulomas, apical scarring)

If the answer to all four questions is NO, then no further screening related to TB is required. Specifically, TST/IGRA testing is not recommended.

If the answer to any one question is YES, ensure that the patient has not had treatment for latent TB infection or active TB in the past. If they have, consult Transplant ID to determine whether treatment was adequate. In addition, check CareConnect for prior IGRA results. If they have had a prior IGRA, do NOT repeat the IGRA - if there is a result on file use that result. If they have not had prior IGRA, then look at the lymphocyte count.

If the lymphocyte count is ≥ 0.5 and there is no prior IGRA result, then perform an IGRA. If the IGRA is positive, determine the type of transplant the patient is getting. If it is an autologous transplant, complete the TB Transplant Physician Referral form (attached) and fax to Provincial TB Services to coordinate LTBI medication and follow-up 604-707-2690 post-transplant. If it is an allogeneic stem cell transplant, assess whether the patient can initiate LTBI therapy. If they can as an inpatient (based on liver function tests and drug interactions) consult Transplant ID to initiate LTBI medication as an inpatient. If LTBI treatment is not currently an option, monitor for signs and symptoms of TB reactivation while waiting for a safe time to initiate LTBI therapy. Before initiating LTBI, repeat CXR and make sure patient does not have symptoms of active TB disease.

If the lymphocyte count is too low for an IGRA OR the IGRA is negative, assess whether the patient was born in a high-incidence country AND has abnormal imaging. If both risk factors are present, determine the type of transplant the patient is getting. If it is an autologous transplant, complete the TB Transplant Physician Referral form (attached) and fax to Provincial TB Services to initiate LTBI medication and follow-up 604-707-2690 post-transplant. If it is an allogeneic stem cell transplant, assess whether the patient can initiate LTBI therapy. If they can as an inpatient (based on drug interactions and liver function tests), consult Transplant ID to initiate LTBI medication as an inpatient. If LTBI treatment is not currently an option, monitor for signs and symptoms of TB reactivation while waiting for a safe time to initiate LTBI therapy. Before initiating LTBI, repeat CXR and make sure patient does not have symptoms of active disease. If patients are not foreign borne but have a history of exposure to TB or previous positive TB skin testing, consult Transplant ID to determine whether the patient needs treatment. For any other patient with only ONE risk factor, monitor for signs or symptoms of active TB.

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At discharge from the inpatient unit, complete the TB Transplant Physician Referral form (attached) and fax to Provincial TB Services to coordinate medication and follow-up 604-707-2690. A referral form should be completed and faxed for any IGRA+ patient or patient on LTBI.

LTBI Treatment in L/BMT Patients

L/BMT patients with evidence of latent TB infection (LTBI) should be started on therapy whenever feasible. Nine months of isoniazid (INH) and pyridoxine (vitamin B6) is the preferred regimen for treatment of LTBI in this patient population. Rifampin is often complicated by drug interactions in this patient population and is discouraged.

Some recipients will be unable to take LTBI therapy due to drug interactions or toxicity. Patients who have not initiated or completed LTBI treatment should begin or resume a full therapeutic course of treatment for LTBI whenever feasible. If these individuals develop symptoms in the setting of incomplete treatment, TB should be in the differential diagnosis.

Patients without evidence of LTBI (i.e. normal chest imaging and negative TST and/or IGRA pre-transplant) but with epidemiologic risk factors for TB (i.e. country of origin) should still be monitored for signs or symptoms of active TB. Fever, pulmonary infiltrates or cavitation, or other organ specific symptoms/signs are potentially signs of active disease.

Patients who have previously completed therapy for active TB or LTBI should still be clinically monitored. Retreatment for LTBI would not be routinely recommended. Treatment of LTBI is 90% effective; there remains a very small chance of reactivation after treatment.

Patients with LTBI who do not have documentation of adequate LTBI therapy should be re-offered therapy as outlined above.

Prior immunosuppression or transplantation is not considered in the decision to offer treatment for LTBI. Recipients who have evidence of LTBI and have not received therapy should be treated regardless of their previous immunosuppression exposure.

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