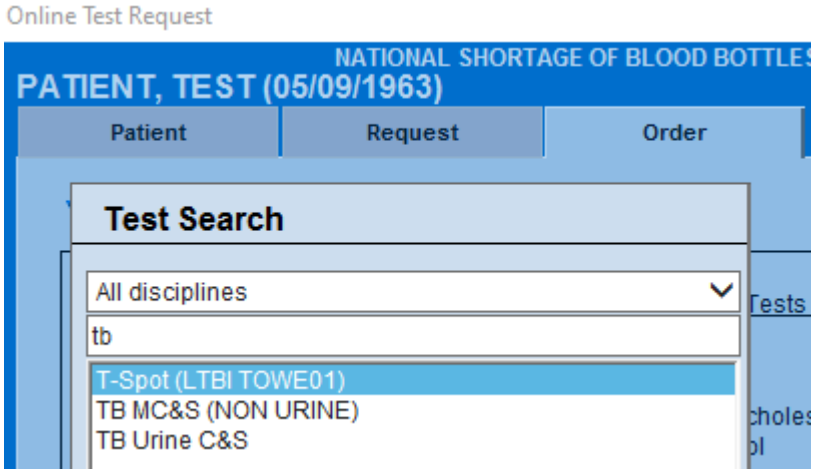
LATENT TB PATHWAY

How to request TB test on EMIS

Please request T-Spot blood test on Tquest

Search for TB and select **T-Spot (LTBI TOWE01)** from the list and ask the patient to attend for a blood test at one of the local phlebotomy centres



ALL patients with a positive T-Spot Blood test result are required to have a

<u>Chest X-ray</u> *(unless they have had one performed within the 3 months prior)*

And the following bloods

- **FBC**
- **U&E's**
- **LFTs**
- **CRP**
- **Hepatitis B Serology(Surface Antigen – HbsAg)**
- **Hepatitis C Serology (Anti-HCV)**

<u>PLEASE ASK THE PATIENT TO BOOK AN APPOINTMENT AFTER THE ABOVE TESTS</u>

DO NOT REQUEST CHEST X-RAY FOR PREGNANT OR BREASTFEEDING PATIENTS –
These patients should be seen in practice to exclude active TB and should be offered a Chest X-ray once they have delivered and completed breastfeeding

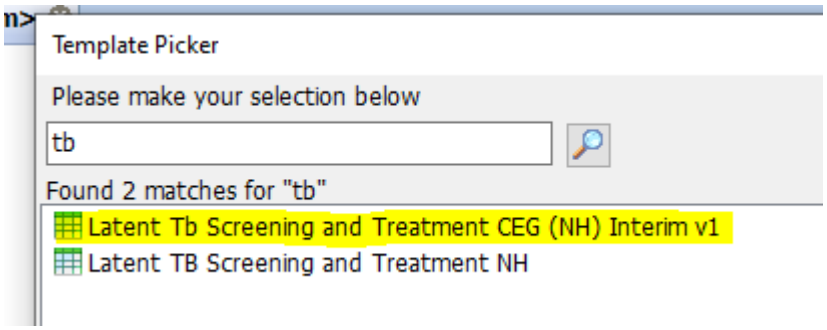
Results will be received through workflow labs as usual

If TB blood test positive, as part of your discussion when you are offering Chest X-ray and Bloods (above), reassure patient that if they have Latent TB they are not infective i.e. no one else in their household would need to be screened.

Once Chest X-Ray and Above Bloods have been completed

If patient is also positive for Hepatitis B, C or HIV – they will need to be invited for a consultation and results explained and a relevant referral made to specialist services for Hepatitis B, C or HIV

Please search for TB and use the **"Latent Tb Screening and Treatment CEG (NH) Interim V1"** template to record your assessment



Take history and perform a physical examination of the chest and palpating for lymphadenopathy to exclude active TB

You will then decide if the patient is suitable for community management or has a risk factor or complicating factor that requires referral to secondary care, such as positive HIV serology

If the patient has symptoms suggestive of Active TB, abnormal results or is high risk for treatment they **should be referred to Newham TB services** with all the necessary results using e-Referral service where they will be treated by the TB team.

If they are low risk for treatment. You need to explain that treatment of latent TB infection is recommended and discuss their options. Emphasise that side effects are uncommon and can be managed if they occur.

Once patient agrees to treatment

Offer patient list of accredited community pharmacists and ask them to choose which will provide them with treatment for LTBI

List of pharmacists and contact details

Pharmacies providing Latent TB service				
No	**Name of Pharmacy**	**Address**	**Postcode**	**Telephone Number**
1	Akro Pharmacy	404 Katherine Road Forest Gate London	E7 8NP	020 8472 0461
2	Beckton Pharmacy	11 Mary Rose Mall, Frobisher Road, London	E6 5LX	020 7476 0243
3	Blakeberry	9 - 11 High Street South Eastham, London	E6 4EN	020 8472 1943
4	Church Rd Pharmacy	30 Church Road, London	E12 6AQ	0208 514 5155
5	Crailmay	70 Green St, London	E7 8JG	020 8472 2370
6	Day Lewis	17-19 Freemasons Road, Custom House, London	E16 3AR	020 7476 2254

7	Duncans Pharmacy	347 High St North, Manor Park, London	E12 6PQ	020 8472 1555
8	Frank Mays Pharmacy	30 Barking Road, London	E6 3BP	020 8472 0601
9	Jetsol Pharmacy	The Hub, 123 Star Lane, Canning Town, London	E16 4PZ	020 7476 1667
10	Kalhan Ltd	75 Plashet Rd, London	E13 0QA	020 8472 2118
11	Mansons Chemist	15 Woodgrange Road, Forest Gate, London	E7 8BA	020 8534 3212
12	Rohpharm	Unit 1 Opus studios, 212 Plaistow Road, London	E13 0AL	020 8471 1040
13	Sai Pharmacy	150-152 High St North, Eastham, London	E6 2HT	0208 552 8955
14	Vicarage Lane Pharmacy	10 Vicarage Ln, London	E15 4ES	020 8555 1564

Send patient Accurx with name of the Accredited Pharmacy

Please only use one of the pharmacies from the above list.

Patient will need to have LFT done 2 weeks after starting treatment and inform the patient that the results will be shared with the Pharmacy

Please issue a 3-month batch prescription for Rifinah (Rifampicin and Isoniazid) and Pyridoxine using EPS repeat dispensing to one of the Accredited Pharmacies from the List only

Adult patients <50kg	**Adult patient >50kg**
Rifinah 150, 3 tablets daily (Total dose: Isoniazid 300mg, Rifampicin 450mg daily) Pyridoxine 25mg once daily	Rifinah 300, 2 tablets daily (Total dose: Isoniazid 300mg, Rifampicin 600mg daily) Pyridoxine 25mg once daily
Duration: 3 months	

Prescription must be sent via EPS

Dot not issue a Green FP10 paper prescription to patient or a prescription token

Once treatment has commenced

Pharmacists will document and keep the practice updated with adherence and any issues i.e. side effects

They will update the practice via email once patient

- **Starts treatment**
- **Declines treatment**
- **Completes treatment**
- **Terminated treatment due to side effects**

The next section below has information on

- **Exclusion of Active TB and risk factors for treatment**
- **Medication and history making patient high risk of drug induced liver injury**

Exclusion of Active TB and Risk factors for treatment

Symptoms	**Result**	**Action**
Cough	Present/Absent	If any one symptom present for <3 weeks review as appropriate. If any one symptom present for >3 weeks or more consider urgent referral for possible active TB.
Fever	Present/Absent	
Night Sweats	Present/Absent	
Weight Loss	Present/Absent	
Physical Examination		
Chest	Normal/Abnormal	
Lymphadenopathy	Present/Absent	
Pulse	Normal/Abnormal	
Investigations		
CXR	Abnormal/Normal	If abnormal refer as appropriate If raised/positive refer to secondary care, see below.
FBC	Abnormal/Normal	
CRP	Abnormal/Normal	
LFTs	Abnormal/Normal	
U+Es	Abnormal/Normal	

HIV	Positive/Negative	
Hepatitis B	Positive/Negative	
Hepatitis C	Positive/Negative	

Medication and history making patient high risk of drug induced liver injury (DILI)		
Rifinah will lower the concentration of some drugs and increase the concentration of others. Please refer to BNF-interactions. Hepatitis B or C infection. Epilepsy. Malnutrition or low serum albumin at baseline. Cirrhosis or any other chronic liver disease. Other concurrent potentially hepatotoxic medications.	Yes/No	If on any of these medications patient should be referred to secondary care for treatment
High alcohol consumption	Yes/No	Please discuss with secondary care for management advice.
Any form of contraceptive pill	Yes/No	If yes – this does not affect treatment recommendation but the patient must be counselled on the need for an alternative (barrier) form of contraception during the 3 months' treatment.

Drug induced liver injury (DILI)

Before starting anti-tuberculosis treatment (ATT) all patients will have had baseline LFTs and hepatitis B&C serology performed. If the patient has an abnormal baseline ALT, AST or bilirubin, they should be offered repeat LFTs in 2 weeks' time. If baseline LFTs remain abnormal, patients should be referred to secondary care. Patients with risk factors for DILI should be referred to secondary care. These risk factors include:

1. Hepatitis B or C infection
2. Heavy alcohol use
3. Malnutrition or low serum albumin at baseline
4. Cirrhosis or any other chronic liver disease

5. Other concurrent potentially hepatotoxic medications

During ATT, DILI should be suspected in any patient that vomits, develops itching, develops jaundice or feels unwell after starting treatment. If this is the case LFTs should be checked.

The table below details how patients with elevated AST or ALT levels should be managed: http://www.journalofinfection.com/article/S0163-4453(10)00206-9/abstract

Liver Function Tests:

Prior to initiating LTBI therapy, all patients should have baseline LFTs with a repeat at 2 weeks after starting LTBI therapy.

	LFTs (Please refer to Reference Range below)	Recommendations	
		Community Pharmacist	GP
LFTs at baseline	If results are abnormal		Repeat LFTs Consider delaying LTBI therapy If Repeat ALT ≥ 82 in Men or ≥ 66 in Women OR bilirubin ≥ 42 (in either sex) Liaise with TB clinician
LFTs After 2 weeks of LTBI Therapy	Normal	Continue with LTBI Therapy	
	Mild Elevation (Not Uncommon) If ALT is 41-81 in Men 33-65 in Women Or Bilirubin < 42 (in either sex)	Continue with LTBI therapy AND Discuss with GP	Repeat LFTs weekly for two weeks, then two weekly until normal

	If ALT ≥ 82 in Men or ≥ 66 in Women OR bilirubin is ≥ 42 (in either sex)	Do not give LTBI therapy Discuss with GP	Liaise with TB clinician Either continue treatment with LFTs weekly for two weeks, then two weekly until normal or stop treatment;
	If ALT is ≥ 123 in Men or ≥ 99 in Women	Do not give LTBI therapy Discuss with GP	Refer to TB clinician urgently
	If LFTs are not done	In the absence of ANY side effects of medication, treatment can be continued while reminding patient to attend for LFT testing	

Reference Range (from Barts/Royal London Biochemistry Lab)

Blood Test	Sex	Normal Range	2x Upper Limit of Normal (ULN)	3x Upper Limit of Normal (ULN)
Bilirubin (µmol/L)	Women and Men	< 21	42	63
Alanine Aminotransferase (ALT) (U/L)	Women	< 33	66	99
	Men	< 41	82	123