### Asthma
- **Confirmed diagnosis of asthma**
- Symptomatic despite $>800\,\text{mcg/BEED}$
- At least 1 exacerbation in previous 12 months
- Inhaled therapies optimised including inhaler technique and adherence review

#### Absolute Contra-indication:
- Previous allergy/intolerance to macrolides
- History of prolonged QTc
- Active NTM disease

#### Baseline ECG:
- If QTc prolonged ($>450\,\text{msec for men}, >470\,\text{msec for women}$) do not give macrolide
- Baseline liver function tests

### COPD
- **Confirmed diagnosis of COPD**
- 3 or more exacerbations in previous 12 months OR
- 1 or more severe exacerbation with hospitalisation/morbidity
- Inhaled therapies optimised including inhaler technique and adherence review, smoking cessation and pulmonary rehabilitation

#### Relative Contra-indications:
- Hearing or balance problems
- History of NTM disease
- Abnormal liver function tests

#### Baseline ECG:
- Standard sputum for baseline culture if able to expectorate
- If bronchiectatic or clinical concern of NTM infection investigate to exclude (following BTS guideline on NTM disease)

### Bronchiectasis
- **Confirmed diagnosis of bronchiectasis**
- 3 or more exacerbations in previous 12 months
- Optimisation of other interventions such as airway clearance and pulmonary rehabilitation

#### Baseline ECG:
- Review concomitant medications for potential interactions

### Performance before starting therapy

#### Baseline ECG:
- If QTc prolonged ($>450\,\text{msec for men}, >470\,\text{msec for women}$) do not give macrolide

#### Baseline liver function tests

### Start Azithromycin therapy

#### Asthma
- **Azithromycin** (250mg/500mg/thrice weekly)
- Plan to treat for 6-12 months
- Warn of potential side effects

#### COPD
- **Azithromycin** 500mg thrice weekly or 250mg daily
- Plan to treat for 6-12 months
- Warn of potential side effects

#### Bronchiectasis
- **Azithromycin** 500mg thrice weekly or 250mg daily
- Plan to treat for 6-12 months
- Warn of potential side effects

### Monitoring during therapy

#### Asthma
- Liver function tests at 1 month and every 6 months
- Repeat ECG at 1 month—If QTc prolonged ($>450\,\text{msec for men}, >470\,\text{msec for women}$) stop macrolide

#### COPD
- Enquire about side effects, especially GI upset and hearing and balance problems
- Standard sputum for culture at review if able to expectorate

#### Bronchiectasis
- Medication review for potential drug interactions and QT prolongation

### Review therapy at 6-12 months

#### Asthma
- Objective evidence of improvement:
  - Reduction in exacerbation rate
  - Improvement in symptoms
  - Change in sputum microbiology including NTM growth
  - Medication review for potential interactions

#### COPD
- Objective evidence of improvement:
  - Reduction in exacerbation rate
  - Improvement in symptoms, QoL or CAT score
  - Change in sputum microbiology including NTM growth
  - Medication review for potential interactions

#### Bronchiectasis
- Objective evidence of improvement:
  - Reduction in exacerbation rate
  - Improvement in symptoms, QoL
  - Change in sputum microbiology including NTM growth
  - Medication review for potential interactions

### Decide if suitable for ongoing therapy

#### Asthma
- Perform individual risk/benefit analysis

#### COPD
- If therapy continued ensure ongoing monitoring and annual review of therapy

#### Bronchiectasis
- Consider treatment break for 3-6 months each year to reduce treatment burden (and possibly reduce microbiological resistance)