$25^{\text{th}}$  WHO Expert Committee on Selection and Use of Essential Medicines Expert review

A.31 Ustekinumab – EML and EMLc					
Reviewer summary	☐ Supportive of the proposal, but second priority behind adalimumab				
	☐ Not supportive of the proposal				
	Justification (based on considerations of the dimensions described below):				
	Ustekinumab is an off-patent biological that targets IL-12/23. In high income countries, it is often used when the patient has psoriasis without psoriatic arthritis or when patients have not responded adequately to TNF inhibitors like adalimumab. It is effective in maintaining long-term control and has a convenient 12 week schedule of administration. It is less prone to tuberculosis reactivation that TNF inhibitors. Its efficacy in trials (see Cochrane meta-analysis) is similar to adalumimab, as is its overall safety. Ustekinumab is however not the "best-in class" among the IL-23 inhibitors, with on patent alternatives achieving higher PASI-90.				
	seen for adalimumab. This and the fact that adalimumab also to consider adalimumab a higher priority for listing in this indication.	but as yet the price of ustekinumab has not reduced to the same level as his and the fact that adalimumab also treats psoriatic arthritis are reasons to higher priority for listing in this indication. Nevertheless, should the price of e cost of adalimumab, then it is an attractive alternative first biological for e psoriasis in LMICs, especially in TB-endemic areas.			
	Lc currently recommend alternative medicines for the can be considered therapeutic alternatives?	⊠ Yes	□ No	☐ Not applicable	
(https://list.essentialmeds.org/)					
The EML recommends a range of topical and systemic therapies for psoriasis, but for the indication of moderate-severe psoriasis, none are currently highly effective. The TNF inhibitor, adalimumab, is also being considered for this indication. The two drugs have similar efficacy and so other factors influence which has priority for listing on EML.					
Does adequate evidence exist for the efficacy/effectiveness of the medicine for the proposed indication?		⊠ Yes	□ No	☐ Not applicable	
(e.g., evidence originating from multiple high-quality studies with sufficient follow up. This may be evidence included in the application, and/or additional evidence identified during the review process;)					
The application includes plentiful evidence from trials and real-world data for the efficacy and effectiveness of this drug for this indication.					
Does adequate evidence exist for the safety/harms associated with the proposed medicine?		⊠ Yes	□ No	☐ Not applicable	
(e.g., evidence originating from multiple high-quality studies with sufficient follow up. This may be evidence included in the application, and/or additional evidence identified during the review process;)					
Ustekinumab has well established safety profile similar to adalimumab, but has less propensity to allow tuberculosis reactivation which is an advantage in MTB-endemic areas.					
Overall, does the proposed medicine have a favourable and meaningful balance of benefits to harms?		⊠ Yes	□ No	☐ Not applicable	
Yes, this is a clinically effective drug with good tolerability and convenient scheduling (every 12 weeks).					

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Are there any special requirements for the safe, effective and appropriate use of the medicines?	□ Yes	□ No	☐ Not applicable	
(e.g. laboratory diagnostic and/or monitoring tests, specialized training for health providers, etc)				
After initial training in self-injection, standard follow is required.				
Are there any issues regarding price, cost-effectiveness and budget implications in different settings?	⊠ Yes	□ No	☐ Not applicable	
As yet, the acquisition costs of this drug have not yet fallen to match those achievable with adalimumab, and this is a significant factor influencing this recommendation.				
Is the medicine available and accessible across countries? (e.g. shortages, generics and biosimilars, pooled procurement programmes, access programmes)	□ Yes	⊠ No	☐ Not applicable	
As yet the drug is not available in African or many Asian countries				
Does the medicine have wide regulatory approval?		☑ Yes, for the proposed indication		
Yes, there is wide regulatory approval across continents		☐ Yes, but only for other indications (off-label for proposed indication)		
	☐ No ☐ Not applicable			