Rheumatoid arthritis PLANETRA extension	Time-point	Maintained on CT-P13 (n = 159)	Switched from Remicade to CT-P13 in extension phase (n = 143)
Yoo DH et al. *Arthritis Rheum.* 2013		% ADA positive	
	Week 54	49.1	49.3
	Week 78	50.4	49.6
	Week 102	46.4	49.6

Ankylosing spondylitis PLANETAS extension	Time-point	Maintained on CT-P13 (n = 90)	Switched from Remicade to CT-P13 in extension phase (n = 84)
Park W et al. *Arthritis Rheum.* 2013		% ADA positive	
	Week 54	22.2	26.2
	Week 78	24.4	31.3
	Week 102	25.0	30.7

ADA, antidrug antibody

FIGURE 12.4 Impact of switching from Remicade to Remsima (CT-P13). ADA positive frequency of patients completing the initial 54-week double-blind treatment period with Remsima or Remicade in Studies, CT-P13 1.1 (ankylosing spondylitis) or CT-P13 3.1 (rheumatoid arthritis), followed by 48-week Open-Label extension periods of continuing treatment: in the PLANETRA extension study, 158 patients were maintained on Remsima, while 144 patients were switched from Remicade to Remsima; in the PLANETAS extension study, 88 patients were maintained on Remsima, while 86 patients were switched from Remicade to Remsima.

Ultimately, it is not possible definitively to prove the negative, that is, that there is zero incremental immunogenicity-related risk associated with switching patients between different biological medicinal products, be they originator or biosimilar products. Preauthorization switching studies might not provide suitably diverse populations for identifying an incremental risk for "real-world" use. Moreover, it is difficult to identify parameters for objective comparison of therapeutic outcome that would not be confounded (in terms of both treatment effect and immune response) by earlier treatment. Arguably, this might place more emphasis on the role of *post*-authorization monitoring of immunogenicity-related risks, as discussed in the next subsection.

The interchangeability, switching, and substitution of biosimilars are discussed further in Chapter 10 of this book.

12.25 POSTAUTHORIZATION EVALUATION

Accumulation of additional information on longer-term safety, including immunogenicity, is a standard element of the EU Risk Management Plan to be applied for postauthorization monitoring of biosimilars.