Cost-minimisation analysis

The supplier has provided a cost minimisation analysis for the replacement of trastuzumab infusion (IV) with trastuzumab subcutaneous (SC) They have estimated savings of s 9(2)(b)(ii) and over the first 5 years in administration costs.

PHARMAC staff have reviewed the supplier's model and note that it does not factor in biosimilar entry for trastuzumab SC. Staff have built their own model to include biosimilar entry. In the base case, the model assumes biosimilar entry in 2016, providing a s 9(2) price drop. The model also looks at a 15-year period, as this is the length of the relevant patent

In this scenario, waiting for biosimilar entry will save approximately s 9(2)(b)(ii) over 15 years compared with switching to trastuzumab SC Even under an extreme scenario, such as assuming only a s 9(2) price drop from biosimilars and entry only in 2020, trastuzumab SC is s 9(2)(b)(ii) more expensive than waiting. A breakdown of these scenarios is shown below.

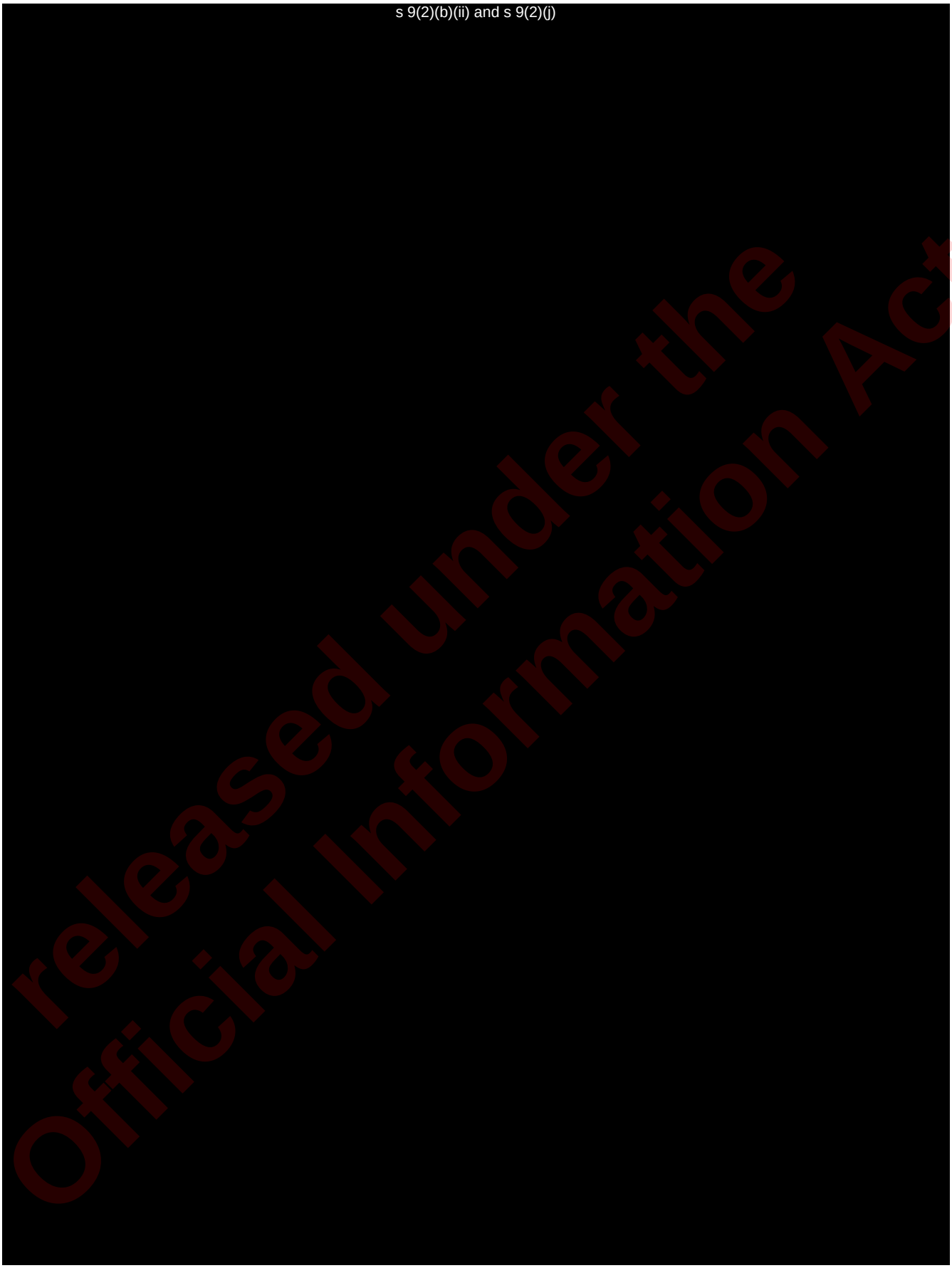
Supplier projections per patient (per year)	**Drug cost**	**Administration costs**	**Total costs**
Current IV	s 9(2)(b)	$3,139	s 9(2)(b)
Biosimilar IV (30% price drop)	s 9(2)(b)	$3,139	s 9(2)(b)
Projected saving for biosimilar entry	s 9(2)(b)	**$0**	s 9(2)(b)
Supplier projection SC	s 9(2)(b)	$435	s 9(2)(b)
Supplier projected savings for hospital SC	s 9(2)(b)	**$2,704**	s 9(2)(b)
Projection for SC in the community	s 9(2)(b)	$0 (best case)	s 9(2)(b)
Projected saving for SC in the community	s 9(2)(b)	**$3,139**	s 9(2)(b)

15 year time horizon

Over a 15 year time horizon, this gives total savings of s 9(2)(b)(ii) for SC in hospital and s 9(2)(b)(ii) for SC in the community. PHARMAC staff note that the projected time savings are unlikely to be realised as trastuzumab is not always given as monotherapy. However, the effect of changes in the assumptions made about the SC is s 9(2)(b)(ii) and 9(2)(j) to the size of the savings from biosimilar entry.

Scenario	Projected 15 year savings
Current IV	s 9(2)(b)(ii)
Trastuzumab SC in hospitals	s 9(2)(b)(ii)
Trastuzumab SC in community (best SC case)	s 9(2)(b)(ii)
Biosimilar IV with 2016 entry, s 9(2) price drop (most probable case)	s 9(2)(b)(ii)
Biosimilar IV with 2016 entry, s 9(2) price drop	s 9(2)(b)(ii)
Biosimilar IV with 2020 entry, s 9(2) price drop (worst case)	s 9(2)(b)(ii)

s 9(2)(b)(ii) and s 9(2)(j)



5 year time horizon

Over a 5 year time horizon, the most likely scenario of trastuzumab SC starting in early 2015 and biosimilar entry (with a s 9(2) price reduction) in mid 2016 gives the savings in the table below

Treatment	5 year discounted savings
Trastuzumab SC in hospital	s 9(2)(b)(ii) and s
Trastuzumab SC in community	s 9(2)(b)(ii) and s
Trastuzumab biosimilar in hospital	s 9(2)(b)(ii) and s

Again the subcutaneous option is s 9(2)(b)(ii) and the option of waiting for biosimilar entry.