

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## Addendum

### **Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the primary/secondary prevention of osteoporotic fragility fractures in postmenopausal women**

Tables present results of the Assessment Group economic evaluation incorporating assumptions on:

- Base case - side effects assumed to affect (91% of the utility of women who do not have such side effects) 2.35% of patients in the first treatment month and 0.35% of patients thereafter (referred to as *base case* in tables below)
- Sensitivity analysis - including the assumption that 24% of women experienced side effects in the first treatment month and 3.5% of women thereafter (referred to as *sensitivity analysis* in tables below )
- Sensitivity analysis – including assumption that fracture risk may be increased in women taking acid-suppressive medication (proton pump inhibitors or histamine 2 receptor antagonists). – data from UK General Practice Research Database cohort study (referred to as *ASM* in table)

Results are presented as incremental cost-effectiveness ratio (ICER) in £ per quality-adjusted life year (QALY).

All results are for the cost per QALY for each treatment compared with no treatment (without any identification costs).

**Results:**

**Table 1: Primary prevention – higher T scores; cost per QALY gained for treatment for an individual women compared with no treatment (identification and assessment costs not included)**

T score		-2.5 SD					
Risk factors		0 CRF			1 CRF		
Age		65	70	75	65	70	75
Drug/assumptions							
Alendronate sensitivity analysis		20,953	5,496	- 1,286	9,824	1,567	- 3,963
Alendronate sensitivity analysis + ASM		45,565	13,236	3,214	22,862	7,727	- 184
Risedronate base case		58,072	35,313	25,628	47,122	28,656	20,107
Risedronate base case + ASM		71,521	44,948	33,990	58,898	37,117	27,595
Risedronate sensitivity analysis		154,062	62,367	39,362	99,407	45,323	28,746
Risedronate sensitivity analysis + ASM		277,751	93,636	58,987	157,085	66,523	43,098
Strontium ranelate base case		112,960	66,293	52,311	93,994	55,367	43,295
T score		-3.0 SD					
Alendronate sensitivity analysis		3,855	- 570	- 4,552	- 495	- 3,276	- 6,378
Alendronate sensitivity analysis + ASM		11,258	4,130	- 1,463	4,234	718	- 3,941
Risedronate base case		37,077	23,447	16,374	28,205	18,095	11,626
Risedronate base case + ASM		47,776	31,671	23,351	38,052	25,651	18,332
Risedronate sensitivity analysis		65,426	34,537	22,136	43,862	24,989	14,923
Risedronate sensitivity analysis + ASM		101,054	52,170	34,391	68,377	38,483	25,313
Strontium ranelate base case		79,209	48,600	37,880	65,335	40,130	30,883

(Red text, dominating; Alendronate at £53 per year)

**Table 2: Primary prevention – lower T scores; cost per QALY gained for treatment for an individual women compared with no treatment (identification and assessment costs not included)**

Age		75 years					
Risk factors	0 CRF		1 CRF		2 CRF		
T score	-3.5	-4	-3.5	-4	-3.5	-4	
Drug/assumptions							
Risedronate base case	9,121	3,359	5,116	67	2	- 3,611	
Risedronate base case + ASM	14,890	8,045	10,505	4,317	3,990	- 439	
Risedronate sensitivity analysis	11,291	3,902	6,091	76	3	- 3,914	
Risedronate sensitivity analysis + ASM	19,614	9,777	13,226	5,071	4,642	- 488	
Strontium ranelate base case	26,342	16,921	20,935	12,277	11,301	5,128	

**Table 3: Secondary prevention; cost per QALY gained for treatment for an individual women compared with no treatment (identification and assessment costs not included)**

T score		-2.5 SD					
Risk factors		0 CRF			1 CRF		
Age		60	65	70	60	65	70
Drug/assumptions							
alendronate sensitivity analysis		9005	3585	-735	3969	-103	-2794
alendronate sensitivity analysis + ASM		21,656	9892	2807	12,249	4968	552

**Risedronate and Strontium ranelate**

T score		-3.0 SD					
Risk factors		0 CRF			1 CRF		
Age		65	70	75	65	70	75
Drug/assumptions							
Risedronate base case		20,704	12,273	8388	14,986	8737	5113
Risedronate base case + ASM		28,719	17,848	13,153	22,522	14,055	9,792
Risedronate sensitivity analysis		28,648	15,436	10,157	19,480	10,629	6015
Risedronate sensitivity analysis + ASM		43,835	23,786	16,695	31,913	17,583	12,049
Strontium ranelate base case		<b>46,963</b>	<b>28,026</b>	<b>22,432</b>	<b>38,449</b>	<b>22,797</b>	<b>17,917</b>

T score		-3.5 SD					
Risedronate base case		10,676	6165	3468	6139	3028	599
Risedronate base case + ASM		17,031	10,988	7,536	11,840	7,688	4,482
Risedronate sensitivity analysis		13,186	7259	3986	7258	3471	673
Risedronate sensitivity analysis + ASM		22,492	13,530	8983	14,826	9195	5209
Strontium ranelate base case		<b>30,748</b>	<b>19,076</b>	<b>14,972</b>	<b>23,879</b>	<b>14,986</b>	<b>11,421</b>