Corrections and further analysis on Strontium Ranelate AR by Assessment Group
12 August 2005

After the Strontium Ranelate Assessment Report was sent out for consultation, the Assessment Group corrected the following errors (changes highlighted):

Table 76: Optimum strategy results when assuming treatment with alendronate and a MAICER of £20,000. Sensitivity analysis where the time to assess risk factors is doubled.

Age (years)	No of Assessment tests undertaken (thousand)	No of BMD scans undertaken (thousand)	Cost of assessment tests and BMD scans (£million)	Number who can be cost-effectively treated (thousand)	Net cost of treatment (£ million) *	Net Benefit of treating cost-effective women (£ million)	Total Net benefit of identification strategy (£ million)
50 – 69	0	0	0	0	0	0	0
70 – 74	774	234	22.4	51	34.5	45.8	23.4
75 – 79	581	566	39.3	145	73.9	155.9	116.6
80 and over	900	809	52.6	502	177.3	536.3	483.7
Total	2,255	1,609	114.3	698	285.7	738.0	623.7

* Acquisition cost minus the costs recouped through reduced incidence of fracture.

Table 77: Optimum strategy results when assuming treatment with alendronate and a MAICER of £20,000. Sensitivity analysis where the time to assess risk factors is halved.

Age (years)	No of Assessment tests undertaken (thousand)	No of BMD scans undertaken (thousand)	Cost of assessment tests and BMD scans (£million)	Number who can be cost-effectively treated (thousand)	Net cost of treatment (£ million) *	Net Benefit of treating cost-effective women (£ million)	Total Net benefit of identification strategy (£ million)
50 – 64	0	0	0	0	0	0	0
65 – 69	879	67	6.1	8	5.3	6.6	0.5
70 – 74	774	234	14.4	51	34.5	45.8	31.4
75 – 79	581	566	31.0	145	73.9	155.9	124.9
80 and over	900	809	40.1	502	177.3	536.3	496.2
Total	3134	1676	91.6	706	291	744.6	653.0

* Acquisition cost minus the costs recouped through reduced incidence of fracture.

Table 78: Optimum strategy results when assuming treatment with alendronate and a MAICER of £20,000. Sensitivity analysis where the cost of DXA scanning is increased by £5

Age	No of Assessment tests undertaken (thousand)	No of BMD scans undertaken (thousand)	Cost of assessment tests and BMD scans (£million)	Number who can be cost-effectively treated (thousand)	Net cost of treatment (£ million) *	Net Benefit of treating cost-effective women (£ million)	Total Net benefit of identification strategy (£ million)
50 - 69	0	0	0	0	0	0	0
70 - 74	774	234	18.2	51	34.5	45.8	27.6
75 - 79	581	566	36.6	145	73.9	155.9	119.3
80 and over	900	809	48.3	502	177.3	536.3	488.0
Total	2255	1609	103.1	698	285.7	738	634.9

* Acquisition cost minus the costs recouped through reduced incidence of fracture.

4.3.2 The identification strategies that are cost-effective at a £20,000 cost per QALY threshold using the WHO algorithm are as follows:

Between 50 and 69 years

No identification strategy is cost-effective

Between 70 and 74 years

Offer BMD scans to all women except those without CRF.

Between 75 and 79 years

Treat women with 3 or more risk factors or who have a parental history of hip fracture and another CRF. Offer BMD scans to all other women.

Aged 80 years and over

Treat all women with parental fracture alone, corticosteroid use alone or any 2 or more clinical risk factors. Offer BMD scanning to all others

The Assessment Group also carried out some further analysis:

Incremental Analysis of cost per QALY

The Assessment Group carried out some additional analysis to establish the incremental cost per QALY for the following comparisons:

- strontium ranelate vs alendronate for Age 70-74 at ~4% absolute risk and ~6% absolute risk
- teriparatide vs alendronate for Age 70-74 at ~8% absolute risk

In order to reach the absolute risk level mentioned, the Assessment Group assumed that no clinical risk factors were present and adjusted BMD, except when comparing teriparatide and alendronate for which I prior fracture alone was assumed and BMD adjusted to reach the absolute risk.

At both levels of absolute risk, alendronate dominates strontium ranelate. Teriparatide is also dominated by alendronate despite its good efficacy at the spine due to its shorter treatment duration which means the benefits of teriparatide are limited to 5 years from the initiation of treatment, whereas treatment with alendronate is assumed to last 5 years and the benefits extend beyond this time.

Simplified algorithms

As suggested at the GDG meeting the Assessment Group have transformed our more complex (but more accurate!) algorithm into a simplified version.

This was done for women with a recent fracture, and ‘general’ women. Tables for women being prescribed glucocorticoids are being developed. Similar tables will need to be developed for men.

We have assumed that women with a prior fracture and on glucocorticoids will still need questioning on risk factors, and have discussions regarding BMD scanning and treatment initiation (where appropriate). Cost per QALY thresholds of £30,000 have been used for women with a previous fracture and on glucocorticoids, but £20,000 used for general women.

The loss in net benefit is not great (a 3% reduction for ‘general’ women, and 0% for women with a previous fracture) and the gains from the logistical ease are probably worth it.

In these tables the following scores per risk are used:

Clinical Risk Factor	Score
Parental history of hip fracture	2
Alcohol Consumption	1
Glucocorticosteroid Use	1
Prior Fracture	1
Rheumatoid Arthritis	1
Smoking	1

For women without a recent fracture and who are not taking glucocorticoids:

Table 1 Results for the simplified identification strategy using CRF points (assuming a MAICER of £20,000 and treatment with alendronate)

	Number of "CRF points" (Score 1 for each CRF except parental history of hip fracture which scores 2)			
Age	0	1	2	3 or more
50-69	Reassure/Lifestyle advice			
70-74	Reassure/Lifestyle advice	DXA & treat at T-Score<= -2.8	DXA & treat at T-Score<= -2.3	DXA & treat at T-Score<= -1.7
75-79	DXA & treat at T-Score<= -3.0	DXA & treat at T-Score<= -2.3	DXA & treat at T-Score<= -1.5	Treat without DXA
80+	DXA & treat at T-Score<= -2.3	DXA & treat at T-Score<= -1.5	Treat without DXA	Treat without DXA

For women with a recent fracture:

Table 2 Results for the simplified identification strategy using CRF points (assuming a MAICER of £30,000 and treatment with alendronate)*

	Number of "CRF points" (Score 1 for each CRF including prior fracture except parental history of hip fracture which scores 2)			
Age	1	2	3	4 or more
50-59	Reassure/Lifestyle advice			
60-64	Reassure/Lifestyle advice	DXA & treat at T-Score<= -2.4	DXA & treat at T-Score<= -2.1	DXA & treat at T-Score<= -1.4
65-69	DXA & treat at T-Score<= -2.6	DXA & treat at T-Score<= -2.1	DXA & treat at T-Score<= -1.7	Treat without DXA
70-74	DXA & treat at T-Score<= -2.0	DXA & treat at T-Score<= -1.3	Treat without DXA	Treat without DXA
75-79	DXA & treat at T-Score<= -1.5	Treat without DXA	Treat without DXA	Treat without DXA
80+	Treat without DXA	Treat without DXA	Treat without DXA	Treat without DXA

*See Steroid induced table for women with prior fracture and corticosteroid use

For women taking glucocorticoids:

Table 3 Results for the simplified identification strategy using CRF points (assuming a MAICER of £20,000 and treatment with alendronate)*

	Number of "CRF points" (Score 1 for each CRF including glucocorticoids use except parental history of hip fracture which scores 2)				
Age	1	2	3	4	5 or more
50-54	Reassure/Lifestyle advice				
55-59	Reassure/Lifestyle advice	Reassure/Lifestyle advice	DXA & treat at T-Score <= -2.3	DXA & treat at T-Score <= -1.8	DXA & treat at T-Score <= -1.1
60-64	Reassure/Lifestyle advice	DXA & treat at T-Score <= -2.5	DXA & treat at T-Score <= -2.2	DXA & treat at T-Score <= -1.7	DXA & treat at T-Score <= -1.0
65-69	DXA & treat at T-Score <= -2.5	DXA & treat at T-Score <= -2.1	DXA & treat at T-Score <= -1.7	DXA & treat at T-Score <= -1.2	Treat without DXA
70-74	DXA & treat at T-Score <= -1.8	DXA & treat at T-Score <= -1.1	Treat without DXA	Treat without DXA	Treat without DXA
75-79	DXA & treat at T-Score <= -1.2	Treat without DXA	Treat without DXA	Treat without DXA	Treat without DXA
80+	Treat without DXA	Treat without DXA	Treat without DXA	Treat without DXA	Treat without DXA