periodontal disease were randomised to either placebo (PBO) or ALN 70 mg once weekly.

Results The overall and upper gastrointestinal (GI) safety and tolerability profile of ALN after one year of treatment was very favourable compared to placebo.

Table 1:

Abstract SAT0167 Table 1

Adverse Events (%) patients)	ALN (N = 167)	PBO (N = 168)	Upper GI Adverse Events (% patients)	ALN (N = 167)	PBO (N = 168)
Any	81.4	84.5	Any upper GI	10.8	11.9
Drug-related [1]	9.0	11.9	Drug-related [1]	4.2	6.5
Discontinued	2.4	3.0	Abdominal pain	4.8	4.8
Serious [2]	5.4	4.8	Dyspepsia	2.4	4.8

[1] Drug-related indicates that the investigator considered the event possibly related to study drug while still blinded to treatment allocation.

[2] Serious adverse events include those requiring hospitalisation or causing death.

Conclusion In summary, 1-year data show that ALN 70 mg once weekly was very well tolerated in men and women with moderate to severe periodontal disease.

SAT0168 RISEDRONATE IS ASSOCIATED WITH A LOWER INCIDENCE OF GASTRIC ULCERS THAN ALENDRONATE: RESULTS FROM TWO COMPARATIVE STUDIES

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Background Bisphosphonates (BPs) are effective treatments for osteoporosis, but some have been associated with GI injury.

Objectives We compared the incidence of gastric ulcers after treatment with risedronate (RIS), a pyridinyl BP, and alendronate (ALN), a primary amino BP, in 2 similar endoscopic studies.

Methods In both studies, healthy postmenopausal women were randomised to receive RIS 5 mg or ALN 10 mg daily for 14 days. Subjects received ALN as original round tablets in Study 1 and as wax-polished oval tablets in Study 2. In Study 2, subjects were stratified by *Helicobacter pylori* (HP) status before randomization. Evaluator-blind assessment of the esophageal, gastric, and duodenal mucosa was performed at baseline and on Days 8 and 15 of each study.

Results In both studies, the overall incidence of gastric ulcers >3 mm was significantly lower in the RIS group than in the ALN (Table 1). Mean gastric erosion scores were significantly lower in the RIS group than in the ALN group at Day 8 and 15 ($p < 0.001$) in both studies. Mean esophageal and duodenal endoscopy scores were similar in the 2 groups at Days 8 and 15. Esophageal ulcers were noted in none of the evaluable subjects in the RIS group and in 3 in the ALN group in Study 1, and in 1 evaluable subject in the RIS group and 2 in the ALN group in Study 2. Duodenal ulcers were noted in 2 evaluable subjects in the RIS group and 1 in the ALN group in Study 1 and in none of the evaluable subjects in Study 2. In Study 2, HP infection did not increase the incidence of BP-related GI injury.

Abstract SAT0168 Table 1

	RIS 5 mg N	RIS 5 mg n (%)	ALN 10 mg N	ALN 10 mg n (%)	P-value
Study 1	221	9 (4.1)	227	30 (13.2)	<0.001
Study 2	300	18 (6.0)	297	36 (12.1)	0.013

Conclusion In 2 large, comparative studies in which RIS and ALN were given at doses for the treatment of osteoporosis, the incidence of gastric ulcers was significantly lower among RIS-treated subjects than among ALN-treated subjects. Results were consistent in the 2 studies despite the difference in the shape and polish of the ALN tablets used. These findings support the hypothesis that BPs differ in their potential to produce upper GI mucosal damage.

SAT0169 INFLUENCE OF VITAMIN D RECEPTOR (VDR) GENOTYPE IN THE BONE LOSS INDUCED BY CORTICOSTEROID THERAPY

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Background Corticosteroid therapy (CST) is a risk factor for developing decreased bone mineral density (BMD). Previous studies suggest that VDR genotype is involved on loosing BMD. **Objectives** To investigate the influence of VDR genotype in changes of BMD induced by CST.

Methods In 53 patients (age 41.7 ± 12.6) without osteoporosis, who received a dose greater than 5 mg daily of prednisone or equivalent for 3 months (mean dose 1.9 g). VDR genotypes were determined by PCR to demonstrate the presence (b) or absence (B) of a restriction target for Bsm I, in intron 7. Bone mineral density (BMD) by DEXA at spine, femoral neck (FN) and Ward's triangle (WT) were measured baseline and 3 months after CST and expressed as a Z-score.

Results The BMD was reduced 3 months after CST (cumulative steroid dosage, mass index, and age was adjusting) without significant difference in both VDR groups: bb, and bB-BB; (Z-score before/3 months after) at Spine: 0.40/0.17 bb; 0.32/0.10 bB-BB; FN: 0.87/0.75 bb; 0.40/0.15 bB-BB; WT: 0.84/0.86 bb; 0.22/0.14 bB-BB. However, when the patients were adjusting to receive more or lesser than 1.3 g cumulative dose, those patients had bb genotype and greater dose had significant lower BMD at WT ($p < 0.05$), respective bB-BB genotypes.

Conclusion Data suggest that the VDR genotype identifies the patients with greater risk to bone loss when high corticosteroids dose is used.

SAT0170 RISEDRONATE REDUCES THE RISK OF NEW VERTEBRAL FRACTURES IN 1 YEAR IN POSTMENOPAUSAL WOMEN ON CORTICOSTEROID THERAPY

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Background Five hundred and nine patients, receiving moderate to high doses of oral corticosteroids (equivalent to 7.5 mg prednisone daily or greater), were enrolled in two studies to examine the effect of risedronate.

Objectives We report here on the results of the group of postmenopausal women in these studies ($n = 255$).

Methods Patients in these studies were randomised to receive placebo, or risedronate (RIS) 2.5 mg, or RIS 5 mg for 1 year. Patients were supplemented with daily elemental calcium (500–1000 mg) and the majority also received supplemental vitamin D (400 IU). Spinal BMD was measured every 3 months; spinal radiographs were taken at baseline and 1 year.

Results In this group of postmenopausal women, RIS 5 mg significantly increased spinal BMD by 2.6% vs placebo (p less than 0.01). Nine out of 56 placebo patients had a new vertebral fracture compared with 3 out of 62 in the RIS 5 mg treated group. This vertebral fracture risk reduction was 73% ($p = 0.050$). Effects of 2.5 mg were consistent with these results.

Conclusion In summary, this study demonstrates that risedronate is effective in maintaining or increasing bone mass and reducing the risk of new vertebral fractures in postmenopausal women on corticosteroid therapy. These findings are consistent with risedronate effects observed in large, 3 year studies in women with confirmed postmenopausal osteoporosis.

SAT0171 EVALUATION OF PULMONARY FUNCTION IN PATIENTS WITH OSTEOPOROSIS

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Background By and large vertebral osteoporotic fractures result, in increased kyphosis angle. This alteration could lead to disturbance in the pulmonary function. Spinal deformity is associated with alterations in pulmonary function.

Objectives Our objective was to evaluate the pulmonary function in osteoporotic patients.

Methods Fifteen women with osteoporosis and vertebral fracture (G1), 20 women with osteoporosis without vertebral fracture (G2) and 20 normal women (G3) were selected. All performed spirometry in the Viatrace-130 SL spirometer.

Results Our results showed that women with osteoporosis and vertebral fracture had increased kyphosis angle (median = 60 degrees), decreased forced vital capacity (G1 vs. G2, $p = 0.020$; G1 vs. G3, $p = 0.039$) and forced expiratory volume in the first second (FEV1)(G1 vs. G2, $p = 0.008$; G1 vs. G3, $p = 0.014$). When compared with women with no vertebral fracture and no osteoporosis there wasn't difference. There was a negative correlation between thoracic kyphosis and the predicted value of expiratory forced volume in one second ($p = 0.003$). Since 55 degrees of thoracic kyphosis the pulmonary function had showed compromised ($p = 0.021$).

Conclusion We conclude that women with vertebral fracture have an increase of their kyphosis angle and a decrease of pulmonary function.

SAT0172 OSTEOPOROSIS PROPHYLAXIS IN PATIENTS RECEIVING CORTICOSTEROIDS

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Background Approximately 2% of all general medical outpatients are taking corticosteroids.¹ The link between corticosteroid consumption and osteoporosis with subsequent fracture is strong² and national guidelines have been drawn up for the prevention of corticosteroid induced osteoporosis (CSIO).³

Objectives To determine by means of re-audit whether management of CSIO improved following two education sessions and the distribution of guidelines to all general medical physicians, after the initial audit in July 1997.

Methods The standard used was the National Osteoporosis Society (NOS) guidelines for the management of CSIO. The notes of all patients attending rheumatology, gastroenterology and respiratory clinics at University Hospital Lewisham during July 1997 for the initial audit and April and May 2000 for the re-audit were examined. Education and guidelines about CSIO were given to all relevant departments and a re-audit undertaken 2 years later.

Results HIGH RISK GROUPS; age > 65 years and on > 7.5 mg/d prednisolone or < 65 years and on > 15 mg/d prednisolone.

Initial audit 67% (57/85) were in this group, 5.2% had lifestyle advice, 15.7% BMD and 43.8% were prescribed prophylaxis.

Re-audit 46.2% (37/80) were in this group, 24.3% had lifestyle advice, 51.3% BMD and 67.6% were prescribed prophylaxis.

MEDIUM RISK GROUPS; age < 65 years, prednisolone dose > 7.5 mg/d < 15 mg/d.

Initial audit 7% (6/85) were in this group, 16.6% had lifestyle advice, 50% BMD and 66.6% were receiving prophylaxis.

Re-audit 32.5% (26/80) were in this group, 30.8% had lifestyle advice, 50% BMD and 42.3% were receiving prophylaxis.

LOW RISK GROUPS; prednisolone < 7.5 mg/d.

Initial audit 25.8% (22/85) were in this group, none had received lifestyle advice, 22.7% BMD and 27.2% were receiving prophylaxis.

Re-audit 21.2% (17/80) were in this group, none received lifestyle advice, 23.5% BMD and 52.9% were receiving prophylaxis.

Conclusion Education and distribution of NOS guidelines lead to an increase in the number of high risk patients receiving appropriate treatment.

The percentage of patients receiving prophylaxis in July 1997 was 41.1% and 56.2% in the re-audit.

Clarity is needed in the management of low risk groups.

Patients receiving lifestyle advice remains unacceptably low.

There is a reluctance to prescribed calcium and vitamin D to medium risk patients and those awaiting DEXA scan results.

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