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International management of bone health in glucocorticoid-exposed individuals in the observational GLOW study

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We used the GLOW database to study the bone health management postmenopausal women with glucocorticoid exposure. GLOW is a five year observational study of 60,000 postmenopausal women enrolled in 17 sites in 10 countries in Europe, North America, and Australia. We studied the use of BMD testing within the past 3 years of the study, and medical management in glucocorticoid-exposed individuals during the third year of survey in GLOW.

Of the 40,058 women with complete data over the five years, 893 (2%) reported continuous use of glucocorticoids over the past 2 or more years at the 3-year survey and 29,080 (73%)

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Jonathan Adachi declares that he is a consultant to Actavis, Amgen, Lilly, Merck and Novartis and is doing clinical trials with Amgen, Lilly, Merck and Novartis.

were non-users. Our study demonstrated considerable differences in BMD management in glucocorticoid users by site and region.. (see Table 1). Glucocorticoid-exposed individuals had greater use of BMD testing and medical management than non-users, although the number of individuals remained low (51%) worldwide in current continuous users. The proportion of individuals with current continuous use who were on calcium and vitamin D varied worldwide (35% to 80% and 32% to 89%, respectively) as did AOM use (41% to 51%). Among women who underwent BMD testing within the past 3 years, AOM and calcium/vitamin D use in glucocorticoid-exposed individuals was 1.8 times higher than that of non-users (33% versus 18%). 50% of CC users were aware of an osteoporosis diagnosis while 29% of nonusers were aware of an osteoporosis diagnosis.

Limitations include our inability to determine glucocorticoid dose or confirm duration of therapy. Limitations include the use of self-reported data that were not confirmed by chart review. Our sites may not be fully representative of a country or region.

We conclude that management of bone health for glucocorticoid exposed individuals is not optimal worldwide.

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Characteristics of GLOW women with 3 years of follow-up who were current continuous (CC) users versus non-users.

Table 1

Region	Calcium use		Vitamin D use		AOM use		BMD testing	
	CC n=880	Non-user n=28,992	CC n=881	Non-user n=28,985	CC n=806	Non-user n=24,241	CC n=857	Non-user n=27,959
Northern Europe* (n=7976)	58 (47, 64)	14 (10, 21)	31 (22, 50)	13 (6, 19)	43 (39, 53)	11 (8, 16)	46 (34, 65)	23 (16, 29)
Southern Europe [†] (n=5610)	35 (22, 55)	22 (7, 31)	32 (22, 41)	22 (12, 32)	38 (26, 55)	23 (19, 27)	57 (27, 66)	47 (43, 50)
USA and Canada** (n=14,649)	80 (71, 95)	70 (63, 78)	89 (77, 100)	79 (72, 86)	42 (20, 67)	22 (8, 28)	71 (59, 86)	62 (35, 81)
Total [‡]	67	45	68	49	42	19	65	48

Data given as per cent (minimum, maximum of sites within region). CC = current continuous user

* Belgium, Germany, Netherlands, UK (4 sites)

[†] France, Italy, Spain (4 sites)

** 7 US sites and 1 Canadian site

[‡] Including Australia