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CORRECTION

Correction to: Efficacy and Safety of Supportive Care Biosimilars Among Cancer Patients: A Systematic Review and Meta-Analysis

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Correction to: BioDrugs (2019) 33:373–389
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The authors unintentionally included in the meta-analysis both the initial abstract and the final paper of the study by Puertolas et al. [45, 48]. In order to remove this duplication, the following corrections are required.

Page 373, abstract, results, line 1: The following sentence, which previously read:

"We identified 29 studies that compared biosimilars of G-CSF or epoetin alfa: one RCT and five cohort studies (total N = 2816) of epoetin alfa biosimilars, and 13 RCTs and 10 cohort studies (total N = 23,561) of G-CSF biosimilars."

should read:

"We identified 28 studies that compared biosimilars of G-CSF or epoetin alfa: one RCT and five cohort studies (total N = 2816) of epoetin alfa biosimilars, and 13 RCTs and 9 cohort studies (total N = 23,043) of G-CSF biosimilars."

The original article can be found online at https://doi.org/10.1007/s40259-019-00356-3.

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Page 377, fig. 1, the following text, which previously read:

Box 8: "Full-text excluded (n = 211)" should read "Full-text excluded (n = 212)"

"Duplicates: 91" should read "Duplicates 92"

Box 9: "Full-text articles assessed for eligibility (n = 29)" should read "Full-text articles assessed for eligibility (n = 28)"

Box 10: "Studies included in qualitative synthesis (n = 29)" should read "Studies included in qualitative synthesis (n = 28)"

Box 11: 'Studies included in quantitative synthesis (n = 29)" should read 'Studies included in quantitative synthesis (n = 28)"

"G-CSF biosimilars:13 RCTs + 10 Cohort studies" should read "G-CSF biosimilars:13 RCTs + 9 Cohort studies"

A corrected version of Fig. 1 is shown below:

Page 379, Table 1, 'G-CSF biosimilars vs. G-CSF' section, 'Puertolas et al. (2016) [45]' row: the entire row should be deleted.

Page 379, Table 1, 'G-CSF biosimilars vs. G-CSF' section, 'Puertolas et al. (2018) [48]' row: The cell entry in column 4 'Sample size (B/R)', which previously read "303/215" should read "49/49".

Page 380, Table 1, 'G-CSF biosimilars vs. G-CSF' section, 'Total patients of cohort studies' row: the cell entry in column 4 'Sample size (B/R)', which previously read "2677/17,739" should read "2374/17,524".

Page 381, section 3.2.2, paragraph 1, line 1: The sentence, which previously read: "Ten cohort studies (2677 patients vs 17,739 patients)…" should read "Nine cohort studies (2374 patients vs 17,524 patients)…".

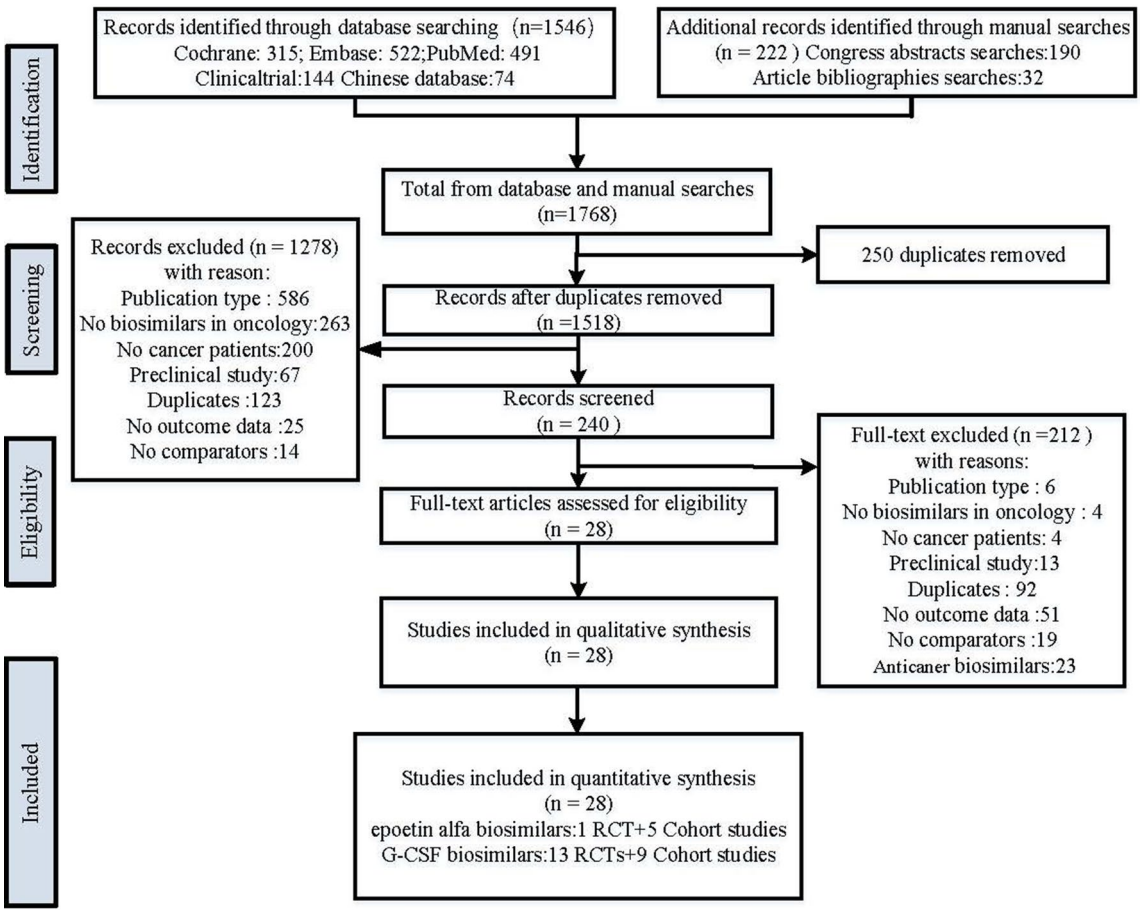

Fig. 1 PRISMA flowchart of included studies. *G-CSF* granulocyte colony-stimulating factors, *RCT* randomized controlled trial

Page 381, section 3.2.2, paragraph 3, line 10: The sentence, which previously read

"In addition, five cohort studies [40, 41, 45, 48, 49] compared the incidence of FN in cycle 1 in cancer patients treated with filgrastim biosimilars (860 patients) and filgrastim (6970 patients)."

should read

"In addition, four cohort studies [40, 41, 48, 49] compared the incidence of FN in cycle 1 in cancer patients treated with filgrastim biosimilars (557 patients) and filgrastim (6755 patients)."

Page 382, Table 3, 'FN incidence in cycle 1 (3 wk)' section, 'Cohort study' study type: the values in the 'Cancer type/Breast cancer' row and the 'Total' row have been corrected. A corrected version of the table is shown below with the corrected text shown in bold.

Table 3 Results for G-CSF biosimilars

Outcomes (follow-up time)	Study type	Group factors	Subgroup	No. study	Sample size (B/R)	Heterogeneity test		Results of meta-analysis			*p*-Value between subgroups	GRADE evidence
						I^2	*p* value	Summary effects	95% CI	*p* value		
FN incidence in cycle 1 (3 wk)	RCT	Drug type	Filgrastim biosimilars	4 [53, 56–58]	470/352	10.8%	0.339	RR = 1.09	0.72 to 1.65	0.19	0.22	Low
			Pegfilgrastim biosimilars	4 [28, 50, 51, 59]	582/515	0.0%	0.81	RR = 1.14	0.73 to 1.79	0.57		
		Cancer type	Breast cancer	5 [28, 50, 56, 57, 59]	738/713	0.0%	0.90	RR = 1.14	0.80 to 1.63	0.47	0.22	
			NSCLC	2 [51, 53]	251/125	0.0%	0.64	RR = 1.53	0.80 to 2.93	0.19		
			NHL	1 [58]	63/29			RR = 0.54	0.20 to 1.46	0.22		
		Total	G-CSF biosimilars	8 [28, 50, 51, 53, 55–59]	1052/867	0.0%	0.74	RR = 1.09	0.80 to 1.49	0.58		
	Cohort study	Cancer type	Breast cancer	**2 [40, 48]**	**196/18**3	**0.0%**	**0.28**	**RR = 1.60**	**0.85 to 3.01**	**0.15**	**0.43**	Moderate
			NHL	1 [41]	12/26			RR = 0.87	0.20 to 3.85	0.85		
			Non-myeloid cancer	1 [49]	349/6546			RR = 0.97	0.46 to 2.05	0.93		
		Total	Filgrastim biosimilars	**4 [40, 41, 48, 49]**	**557/67**55	**0.0%**	**0.35**	**RR = 1.25**	**0.79 to 1.98**	**0.35**		

Outcomes (follow-up time)	Study type	Group factors	Subgroup	No. study	Sample size (B/R)	Heterogeneity test		Results of meta-analysis			*p*-Value between subgroups	GRADE evidence
						I^2	*p* value	Summary effects	95% CI	*p* value		
DSN in cycle 1 (3 wk)	RCT	Cancer type	Breast cancer	7 [28, 50, 52, 54, 57, 59, 60]	1092/975	0.0%	0.70	WMD = 0.03	− 0.07 to 0.13	0.50	0.27	Moderate
			NHL	1 [58]	63/29			WMD = − 0.40	− 1.17 to 0.37	0.31		
		Drug type	Filgrastim biosimilars	3 [54, 57, 58]	386/260	0.0%	0.37	WMD = 0.06	− 0.12 to 0.23	0.53	0.70	Moderate
			Pegfilgrastim biosimilars	5 [28, 50, 52, 59, 60]	769/744	0.0%	0.58	WMD = 0.01	− 0.11 to 0.13	0.83		
		Total	G-CSF biosimilars	8 [28, 50, 52, 54, 57–60]	1155/1004	0.0%	0.66	WMD = 0.03	− 0.07 to 0.13	0.59		
Time to ANC recovery in cycle 1 (3 wk)	RCT	Cancer type	Breast cancer	4 [50, 52, 59, 60]	587/569	28.7%	0.24	WMD = 0.07	− 0.10 to 0.24	0.42	0.84	Moderate
			NSCLC	1 [51]	93/46			WMD = − 0.07	− 1.41 to 1.27	0.92		
		Total	Pegfilgrastim biosimilars	5 [49–52, 59, 60]	680/615	5.8%	0.37	WMD = 0.07	− 0.10 to 0.24	0.43		
	Cohort study	NHL	Filgrastim biosimilars	1 [41]	12/26			WMD = − 0.14	− 0.42 to 0.70	0.63		Low
Bone pain rate (3–30 wk)	RCT	Cancer type	Breast cancer	2 [54, 59]	512/355	80.9%	0.02	RR = 0.89	0.76 to 1.03	0.12	0.63	Moderate
			NSCLC	1 [53]	158/79			RR = 1.20	0.44 to 3.29	0.72		
			Various tumors	1 [55]	54/54			RR = 1.25	0.53 to 2.92	0.61		
		Total	Filgrastim biosimilars	4 [53–55, 59]	724/488	51.3%	0.10	RR = 0.90	0.78 to 1.05	0.18		
	Cohort study	Various tumors	Filgrastim biosimilars	4 [42–44, 46]	123/309	0.0%	0.61	RR = 0.86	0.59 to 1.24	0.41		Moderate

Outcomes (follow-up time)	Study type	Group factors	Subgroup	No. study	Sample size (B/R)	Heterogeneity test		Results of meta-analysis			*p*-Value between sub-groups	GRADE evidence
						I^2	*p* value	Summary effects	95% CI	*p* value		
ADE rate (3–30 wk)	RCT	Drug type	Filgrastim biosimilars	4 [29, 54, 56, 60]	674/412	6.3%	0.36	RR = 1.03	0.97 to 1.09	0.35		Moderate
			Pegfilgrastim biosimilars	3 [29, 51, 59]	579/463	61.8%	0.07	RR = 0.98	0.95 to 1.01	0.24	0.16	
		Cancer type	Breast cancer	6 [28, 29, 54, 56, 59, 60]	1158/825	32.8%	0.19	RR = 0.99	0.96 to 1.02	0.61	0.08	
			NSCLC	1 [51]	95/50			RR = 0.92	0.50 to 1.71	0.40		
		Total	G-CSF biosimilars	7 [28, 29, 51, 54, 56, 59, 60]	1253/875	42.4%	0.10	RR = 0.98	0.95 to 1.02	0.39		
	Cohort study	Various tumors	Filgrastim biosimilars	1 [47]	1694/10,460			RR = 1.08	0.89 to 1.31	0.43		Moderate

ADE adverse drug event, *ANC* absolute neutrophil count, *B/R* biosimilars/reference biologics, *CI* confidence interval, *DSN* duration of severe (grade 4) neutropenia, *FN* febrile neutropenia, *G-CSF* granulocyte colony-stimulating factors, *GRADE* Grading of Recommendations Assessment, Development and Evaluation, *NHL* non-Hodgkin's lymphoma, *No. study* number of included studies, *NSCLC* nonsquamous non–small-cell lung cancer, *RCT* randomized controlled trial, *RR* risk ratio, *WMD* weighted mean difference

Page 384, Fig. 3, 'FN incidence in cycle1.cohort study' section, 'Breast cancer' subgroup:

- the text in the 'Study number' column that previously read "3" should read "2";
- the text in the 'Biosimilar sample size' column that previously read "499" should read "196";
- the text in 'Reference sample size' column that previously read '398" should read "183";
- the text in the 'P of meta-analysis' column that previously read "0.22" should read "0.15";
- the text in the 'P between sub-groups' column that previously read "0.68" should read "0.43";
- the text in the 'ES (95% CI)' column that previously read "1.36 (0.84, 2.23)" should read "1.60 (0.85, 30.1)".

Page 384, Fig. 3, 'FN incidence in cycle1.cohort study' section, 'F biosimilars' row:

- the text in the 'Study number' column that previously read "5" should read "4";
- the text in the 'Biosimilar sample size' column that previously read "860" should read "557";
- the text in 'Reference sample size' column that previously read "6970" should read "6755";
- the text in the 'P of meta-analysis' column that previously read "0.36" should read "0.35";
- the text in the 'ES (95% CI)' column that previously read "1.20 (0.81, 1.78)" should read "1.25 (0.79, 1.98)".

A corrected version of Fig. 3 is shown below.

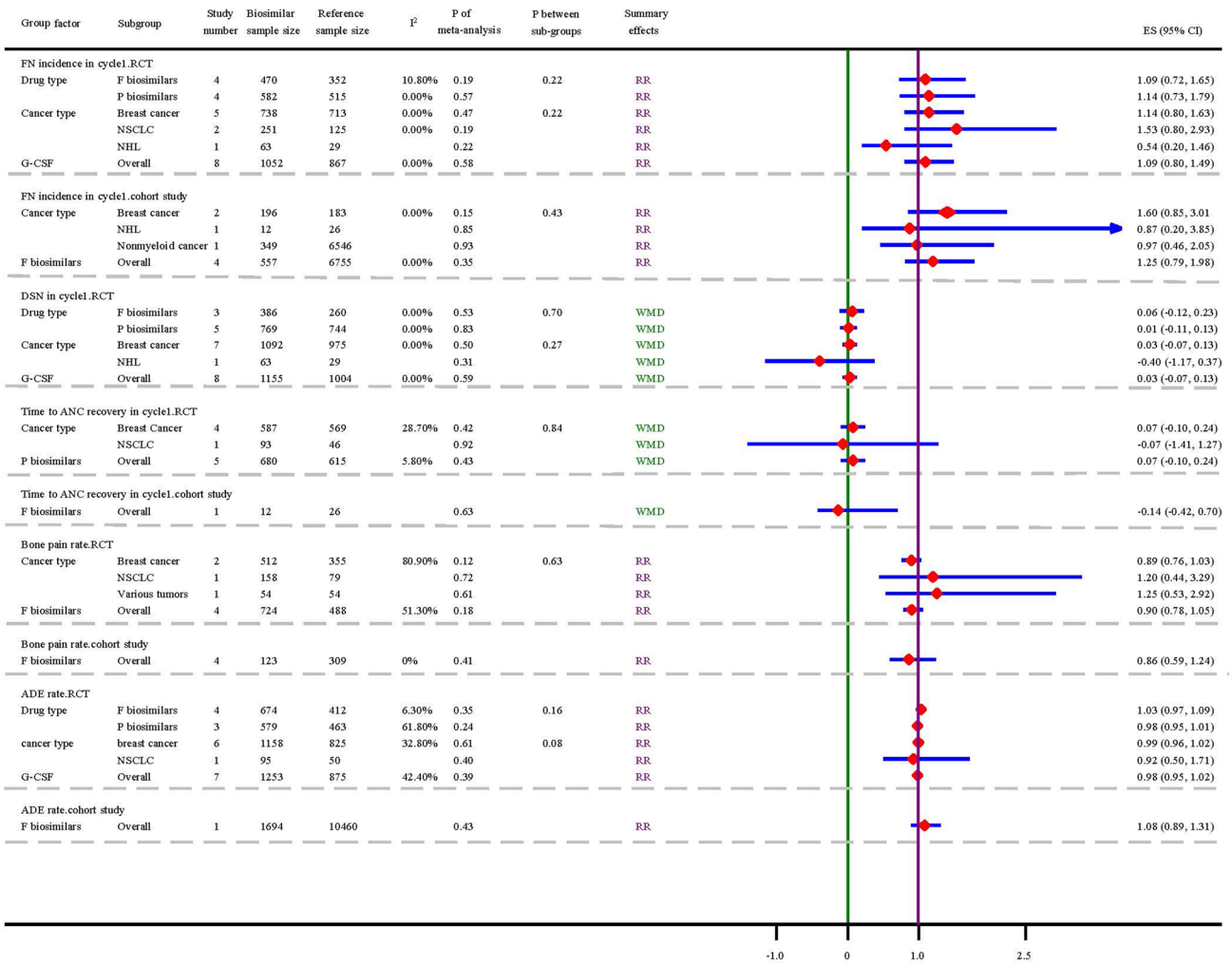

Fig. 3 Meta-analysis of G-CSF biosimilar drugs vs G-CSF drugs. *ADE* at least one adverse drug event, *ANC* absolute neutrophil count, *CI* confidence interval, *DSN* duration of severe (grade 4) neutropenia, *ES* effect size, *F* biosimilars filgrastim biosimilars, *FN* febrile neutropenia, *G-CSF* granulocyte colony-stimulating factors, *NHL* non-Hodgkin's lymphoma, *NSCLC* nonsquamous non–small-cell lung cancer, *P* biosimilars pegfilgrastim biosimilars, *RCT* randomized controlled trial, *RR* risk ratio, *WMD* weighted mean differences

Page 388, Reference # 45: This reference should be deleted.

Electronic Supplementary Material, Supplementary Table 3, 'Puertolas et al. 2016 [25]' row: this row should be deleted.

Electronic Supplementary Material, Supplementary Table 5, 'FN incidence in cycle1' row:

the text in column 'study' that previously read "5 [20, 21, 25, 27, 28]" should read "4 [20, 21, 27, 28]"

the text in column 'patient' that previously read "7830" should read "7312"

Electronic Supplementary Material, page 9, reference #25: this reference should be deleted