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Literature summary and figures

NiTi Brush for peri-implantitis - 34 publications, and how they are counted

Where the published evidence comes from: the counting rules, the countries and institutions represented, the investigators, and the patients and implants reported in each study. Every figure here is derived from the publications listed in the clinical evidence overview and can be traced back to them.

For distributors, clinical reviewers and partners assessing the evidence base.

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Rev. 2 · 12 October 2026

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At a glance

Figure	Count
Verified publications	34
Countries	20
Universities & institutions	59
Investigators	141
Patients	723
Implants treated	at least 1,088
Months follow-up	6~120

The figures, and how they are counted

Every number HANS Korea quotes about the literature comes from the thirty-four papers on the Published studies page and nothing else. This page shows the counting rules and the lists behind each figure, so that a reader can check them.

Figures, counting rules, the 59 institutions, the 141 investigators and the per-study patient table in one document. Revision 2 · 12 October 2026.

Figure	Counting rule	Source
34 publications	A paper is counted only when it has been read in full, verified against the publisher's record, and names the instrument as the NiTi Brush of HANS Korea in its text or figures, under its current name, its former name I.C.T. (Implant Cleaning Technique), or the RotoBrush name used by HANS Korea's United States distributor, Salvin Dental Specialties. Papers reporting merely "a titanium brush{{FN-TIBRUSH}}" are excluded. Nine randomised-controlled-trial publications and one quasi-randomised controlled trial, nine clinical studies (a retrospective cohort, retrospective analyses, case series and case reports), eleven translational and laboratory studies (one of them in an animal model, one a doctoral thesis), four reviews.	Publisher records (CrossRef, PubMed, J-STAGE), full texts
20 countries	Countries of the authors' affiliations as printed in each paper; a country is counted once however many papers or authors it appears in.	Author affiliations
59 institutions	Universities, university hospitals, research institutes and named clinics in the authors' affiliations, each counted once. Affiliations given only as "private practice" without a name are not counted.	Author affiliations

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Figure	Counting rule	Source
141 investigators	Every named author across the thirty-four papers, counted once regardless of how many papers they appear in.	Author lists (CrossRef, PubMed, paper)
723 patients	Sum of the patients treated in the fifteen clinical studies that report them. Where two papers report the same patients (the 1-year and 3-year reports of one trial; a trial and its secondary analysis; a single-centre report of a multicentre trial; a retrospective cohort that covers the same centre and period as an earlier report) the cohort is counted once. In the one randomised trial where the brush was used in one arm only, only that arm is counted. Translational and laboratory studies and reviews contribute none.	Methods / Results of each paper
at least 1,088 implants	Same rule for implants. One multicentre trial reports patients but not implants; it is counted as one implant per patient, so the total is a minimum.	Methods / Results of each paper
6~120 months	Shortest and longest follow-up reported in the clinical studies: 6 months (Galarraga-Vinueza et al. 2020; Malmqvist et al. 2025) to 120 months (Parma-Benfenati et al. 2026, a 10-year case report). Among the cohort studies the longest follow-up is 42 months (Brincat et al. 2023); the 3-year trial report covers 36 months.	Methods of each paper

Countries and institutions

Country	Universities, hospitals, research institutes and named clinics
Spain	Complutense University of Madrid (ETEP Research Group) · Universitat Internacional de Catalunya, Barcelona · Universitat Politècnica de Catalunya (UPC), Barcelona · ICREA – Catalan Institution for Research and Advanced Studies, Barcelona · University of Alcalá, Madrid · Alfonso X el Sabio University, Madrid · Euneiz University, Vitoria-Gasteiz · Clínica Ortiz-Vigón PerioCentrum / ThinkingPerio Research, Bilbao · Clínica Guerrero, Marbella · Brånemark Clinic, Las Palmas · CICOM, Badajoz
Italy	University of Padua · University of Trento · University of Turin · University of Ferrara · University of Modena and Reggio Emilia · Istituto Italiano di Tecnologia, Ferrara · University of Siena
Sweden	University of Gothenburg (Sahlgrenska Academy) · Public Dental Service, Region Västra Götaland · Uppsala University · Karolinska Institutet, Huddinge · Public Dental Health Services Stockholm · Kami Dental, Enköping
United States	University of Michigan · Harvard School of Dental Medicine · Rutgers School of Dental Medicine · New York University College of Dentistry · Sioux Falls Family and Implant Dentistry, South Dakota

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Country	Universities, hospitals, research institutes and named clinics
China	Shanghai Jiao Tong University (Ninth People's Hospital) · Sun Yat-sen University, Guangzhou · Guangdong Provincial Key Laboratory of Stomatology · Guangdong Research Center for Dental and Cranial Rehabilitation and Material Engineering
France	Aix-Marseille University · Assistance Publique – Hôpitaux de Marseille (AP-HM) · IHU Méditerranée Infection · Institut de Recherche pour le Développement (IRD)
Germany	Goethe University Frankfurt (Carolinum and University Hospital) · University Hospital Düsseldorf · Charité – Universitätsmedizin Berlin
Japan	The Nippon Dental University Niigata Hospital · Tokyo Medical and Dental University · Kanagawa Dental University
Saudi Arabia	Umm Al-Qura University, Makkah · Najran University · Dar Al Uloom University, Riyadh
Chile	Universidad de La Frontera, Temuco · Universidad de Antofagasta
United Kingdom	King's College London · University of Birmingham
Brazil	Federal University of Santa Catarina, Florianópolis
Dominican Republic	Universidad Federico Henríquez y Carvajal, Santo Domingo
Egypt	Qena University, Qena
Jordan	University of Jordan, Amman
New Zealand	University of Otago (Sir John Walsh Research Institute), Dunedin
Peru	Universidad Científica del Sur, Lima
South Korea	Gangneung-Wonju National University
Switzerland	University of Bern
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Alphabetical by family name. Listing an author here records only that they published a paper in which the NiTi Brush was used; it implies no relationship with, or endorsement of, HANS Korea.

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Patients and implants by study

Translational and laboratory studies (Dionigi et al. 2025; Brunello et al. 2025; Kao et al. 2024; Ichioka et al. 2022 and 2023; Kim et al. 2016; Suzuki et al. 2014; Liu et al. 2023; Tagliaferri et al. 2024; Panes et al. 2024, an animal study; Narendrakumar 2015, a doctoral thesis) and reviews (Pappolla Sessa et al. 2025; Hiroyasu 2018; Kusek 2015; Regidor et al. 2023) contribute authors, institutions and countries but no patients. Revision 2 · 12 October 2026. This page is revised, with a new revision number, whenever a paper is added or removed.

Study	Patients	Implants	Follow-up	Counted?
Derks et al. 2022 · multicentre RCT	138	147	12 months	Yes
Alibegovic et al. 2025 · 3-year report of the same trial	120	127	36 months	Same cohort — not added
Monje et al. 2025 · multicentre RCT (surface decontamination)	58	at least 58	12 months	Yes
Monje, Pons, Peña 2024 · single-centre report of that trial	19	23	12 months	Subset — not added
Regidor et al. 2023 · RCT (resorbable membrane)	43	43	12 months	Yes
Regidor et al. 2026 · RCT (adjunctive electrolytic cleaning)	40	44	12 months	Yes
Malmqvist et al. 2025 · RCT, flap-surgery arm (the arm in which the brush was used)	12	12	6 months	Yes
Monje et al. 2023 · RCT (barrier membrane)	33	48	12 months	Yes

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Study	Patients	Implants	Follow-up	Counted?
Monje et al. 2023 · defect angle (secondary analysis)	33	48	12 months	Same cohort — not added
Monje et al. 2026 · quasi-randomised trial (extent of implantoplasty)	33	40	12 months	Yes
Monje et al. 2025 · rhPDGF-BB case series	10	13	12 months	Yes
Zhou et al. 2026 · retrospective cohort, Frankfurt, 2018–2023	223	406	mean 30.8 months	Yes
Schwarz et al. 2023 · retrospective, Frankfurt, 2018–2021	36	40	12 months	Same centre and period as Zhou et al. 2026 — not added
Galarraga-Vinueza et al. 2020 · pilot	20	28	6 months	Yes
Monje et al. 2021 · retrospective (implantoplasty)	43	135	about 24 months	Yes
Brincat et al. 2023 · case series	57	91	12–42 months	Yes
Babgi & Felemban 2024 · two cases	2	2	—	Yes
Parma-Benfenati et al. 2026 · 10-year case report	1	1	120 months	Yes
Soliman et al. 2026 · split-mouth RCT (autogenous bone vs xenograft)	10	20	12 months	Yes
Total counted	723	at least 1,088	6~120 months	

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