

# A Long term radiological evaluation of titanium screw-cylinder implants: a retrospective study

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## Aim:

The present retrospective study investigated the clinical and radiological outcomes of Camlog ® screw-cylinder implants from 1 to 13 years.

## Materials and methods:

- Implant brand:screw-cylinder dental implants (Camlog ®, CAMLOG Biotechnologies, Basel, Switzerland)
- Time Range:2002-2008
- Hospital: Department of Dental Implant, School of Stomatology, the Forth Military Medical University
- Surgeon: Dehua Li *MMD,DDS*
- Number of Patients: 187
- Number of Implants: 384
- Follow-up rate: 49.7%
- The follow-up period was 1-13 years.

## Results:

- The Location of the implant placement and the Implant information

	Anterior	Posterior	Full-arch
Maxilla	76	93	4
Mandible	19	179	13

Length(mm)	3.3	4.3	5	Total	
Numbers(N)	22	205	157	384	
Implant Diameter(mm)	9	11	13	16	
Numbers(N)	14	140	228	2	384

- The Surgery Type for the total of 384 dental implants

Surgery Type	Numbers
Simple implant	231
Immediate implant placement	8
Implant placement + GBR	93
sinus lifting	41
alveolar split augmentation	11
Total	384

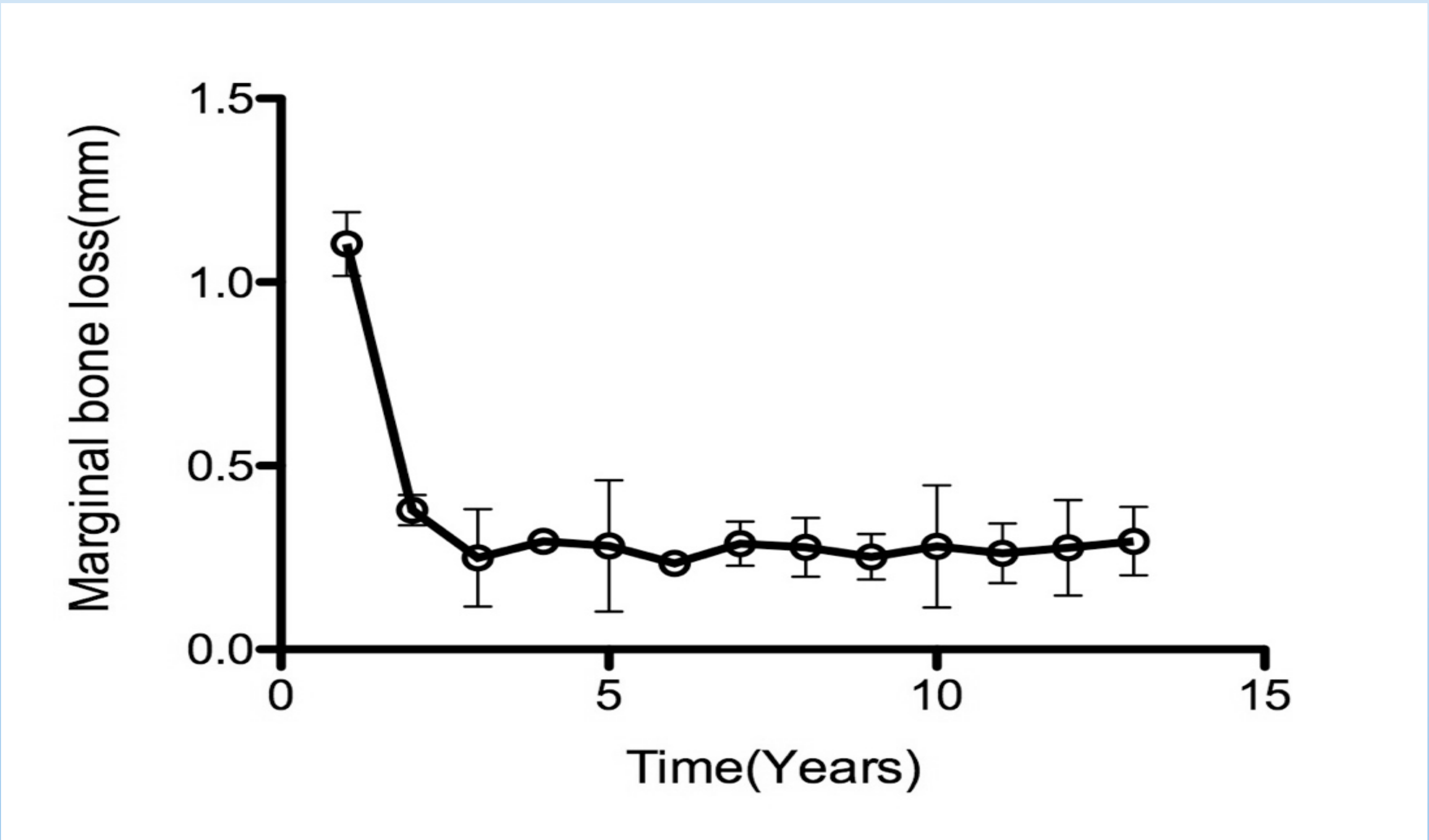
- The Restoration Type for the total of 271 Dentures

Denture Type	Numbers
Fixed single tooth	111
Fixed multiple tooth	53
Fixed bridge	48
Implant-retained overdenture	5
Total	217

- The results of clinical evaluation for implant-based analysis showed the 13-year cumulative survival rate (96.3%,) was comparable to the 5-year cumulative survival rate (96.8%).
- Life-table analysis showing implant survival and success rates

Time interval (Year)	Recalled patients	Implants at start of interval	Implants removed	Failing implants	Cumulative survival rate %	Cumulative success rate %
0-1	93	189	6	6	96.8	96.8
1-2	89	181	0	0	96.3	96.3
2-3	88	179	0	2	96.3	95.0
3-4	76	160	0	0	96.3	95.0
4-5	70	147	0	0	96.3	95.0
5-6	63	138	0	0	96.3	95.0
6-7	56	120	0	0	96.3	95.0
7-8	54	115	0	0	96.3	95.0
8-9	51	108	0	0	96.3	95.0
9-10	46	95	0	0	96.3	95.0
10-11	37	73	1	1	96.3	94.3
11-12	28	54	0	0	95.6	94.3
12-13	19	38	0	0	95.6	94.3

- The marginal bone loss was  $1.104 \pm 0.087$  at the first year, and then it maintained within 0.2mm per year. The median observation period was 48 months



- In total of 7 implants (3.7%) were failed, 5 of the implants did not show osseointegration after implant surgery, and the other two were lost after loading. All the implant failing was either less related to implanting surgery type, the patients’ gender or smoking habit ( $P>0.05$ ).

No. of the patients	Smoking	Location	Surgery type	Diameter (mm)	Length (mm)	Time of insert	Time of failing	Reason	time of failure
541	NO	46	Implant+GBR	4.3	13	2003-11-17	2004-4-13	with out osseointigrate	early
615	NO	17	Implant	5	11	2004-12-28	2015-9-3	infection	late
622	YES	47	Implant	4.3	13	2004-6-17	2004-12-3	with out osseointigrate	early
666	NO	34	Implant+GBR	5	11	2004-9-20	2005-5-23	infection	late
667	YES	47	Implant	5	11	2004-9-21	2004-12-31	infection	early
677	YES	11	Implant	4.3	11	2004-10-14	2005-4-25	infection	early
694	NO	36	Implant	4.3	13	2004-11-18	2005-1-7	infection	early

## Disclosure:

Based upon this retrospective study on 189 implants placed during the 13 years, it demonstrated that Camlog® dental implants maintain a high survival rate and stable bone margin level.