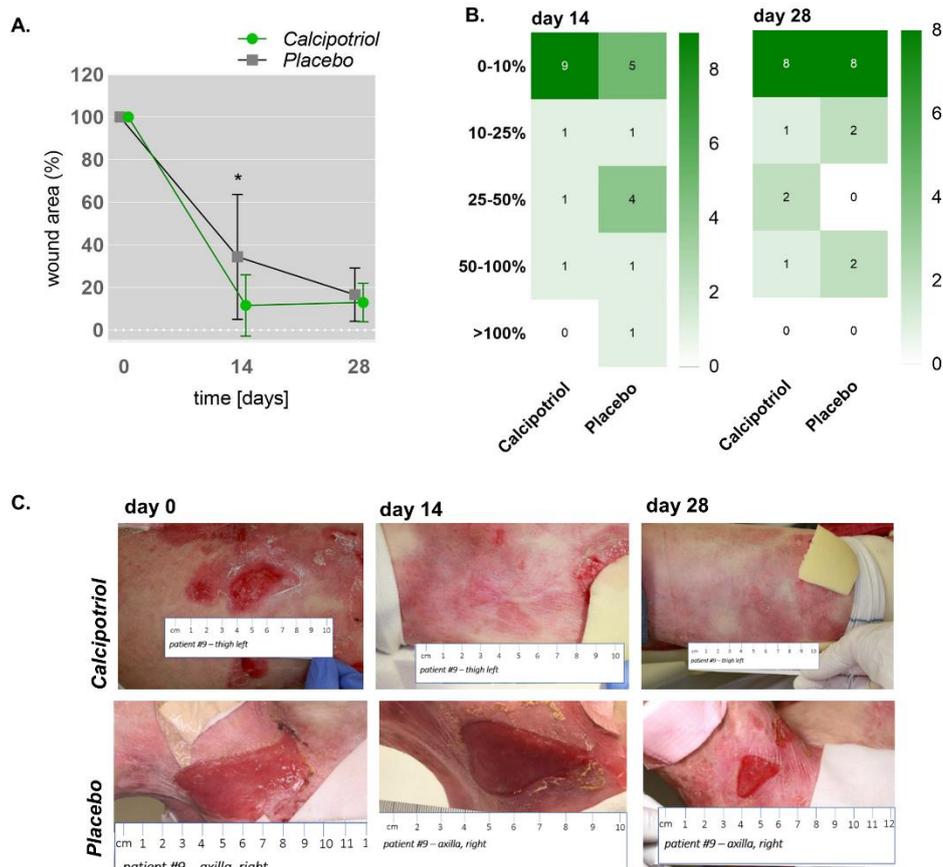
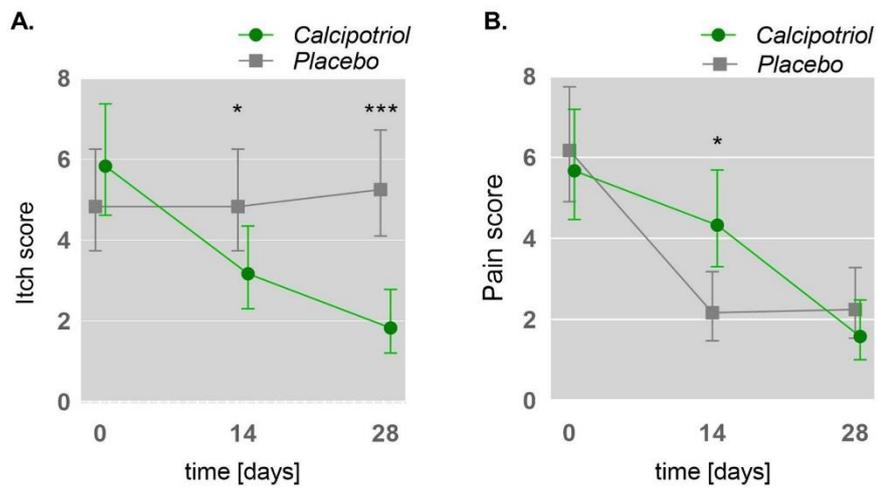


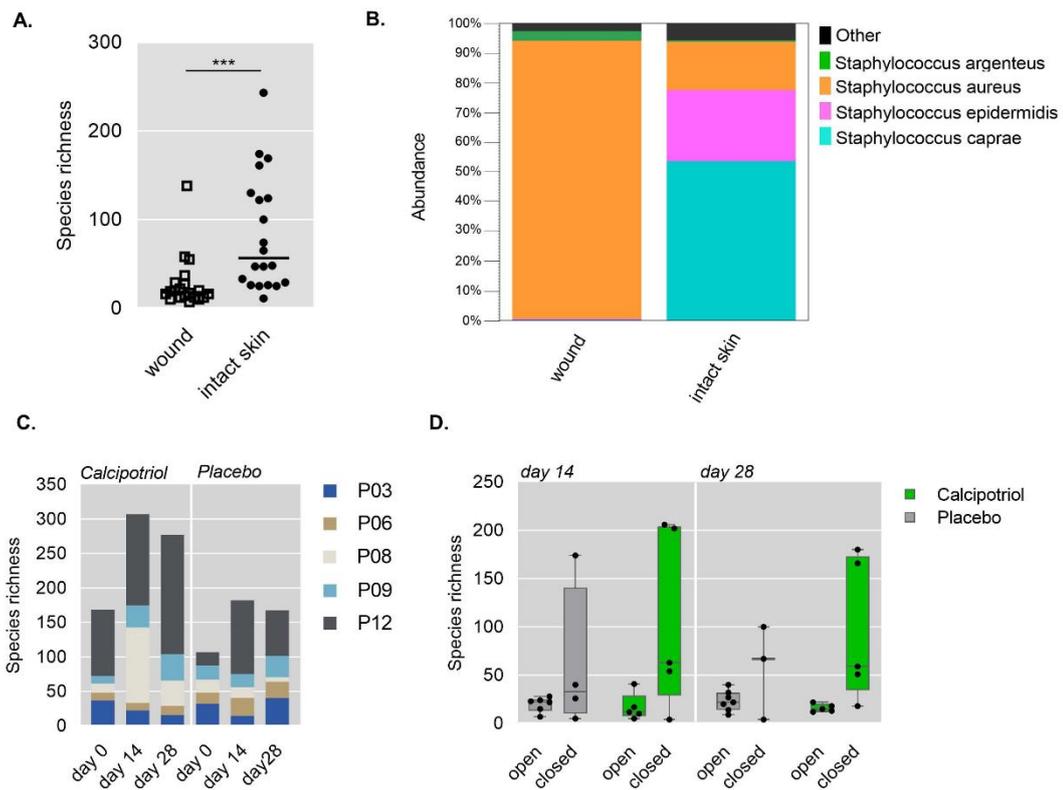
**Figure1. Clinical study design** We performed a two-armed, double blind, randomized, cross-over phase II study. Patients were randomized into two groups receiving either calcipotriol ointment (0.05 µg/g) or the placebo. 1g of ointment (either verum or placebo) was applied topically on each of two designated target wounds for a period of 4 weeks. After a 2-month wash-out phase the patient crossed over into the second treatment arm. Clinical assessment of patients was performed every two weeks (day 0, 14 and 28) at the study center when wounds were photographed and swabbed for microbiome analysis.



**Figure 2. Impact of low-dose calcipotriol treatment on wound healing.** (A) Size of wound area (%) representing mean with 95% confidence intervals (CIs) at baseline (day 0), 14 and 28 days of treatment with low-dose calcipotriol or placebo. Statistical analysis; generalized estimation-equation model based on gamma distribution, \*  $P = 0.006$  (B). Heat plot showing numbers of wounds with 0-10%, 10-20%, 25-50%, 50-100% or >100% wound area compared to baseline after treatment with low-dose calcipotriol or placebo at 14 and 28 days (C) Clinical pictures of wounds of a patient responding well to low-dose calcipotriol (0.05  $\mu\text{g/g}$ ) treatment at baseline, 14 and 28 days of treatment with low-dose calcipotriol or placebo.



**Figure 3: Influence of low-dose calcipotriol treatment on itch (A) and pain (B).** Scores were assessed for each wound at baseline (day 0), 14 and 28 days of treatment with low-dose calcipotriol or placebo using a visual analog scale (VAS) ranging from 0 (no itch/pain) to 10 (maximum itch/pain). Mean with 95% Confidence Intervals (CIs) are shown. Statistical analysis; generalized estimation-equation model based on gamma distribution, \*  $P < 0.05$ , \*\*\*  $P < 0.0001$ .



**Figure 4: Effects of low-dose calcipotriol treatment on wound microbiome.** (A) Scatter plot showing species richness on intact skin compared to wounds. Each dot represents an individual wound at baseline (day 0). Statistical analysis; Mann Whitney test, \*\*\*  $P = 0.0001$ . (B) Relative abundance of staphylococcus species in all wounds and on intact skin at baseline (day 0). (C) Microbial species richness of wounds at baseline, after 14 and 28 day-treatment with low-dose calcipotriol or placebo. Data are presented as mean of two wounds of individual patients. (D) Species richness in open vs completely closed wounds after 14 and 28 day- treatment with low-dose calcipotriol or placebo.