


CORRECTION

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# Correction to: Psoralen alleviates radiation-induced bone injury by rescuing skeletal stem cell stemness through AKT mediated up-regulation of GSK-3 $\beta$ and NRF2

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Following publication of the original article [1], the authors have identified that the incorrect image of micro-CT scanning for normal group in Fig. 1a was included

due to an error during figure preparation. The corrected image of micro-CT scanning for normal group has been updated in Fig. 1a. Therefore, the revised Fig. 1 is given in this article.

The original article can be found online at <https://doi.org/10.1186/s13287-022-02911-2>.

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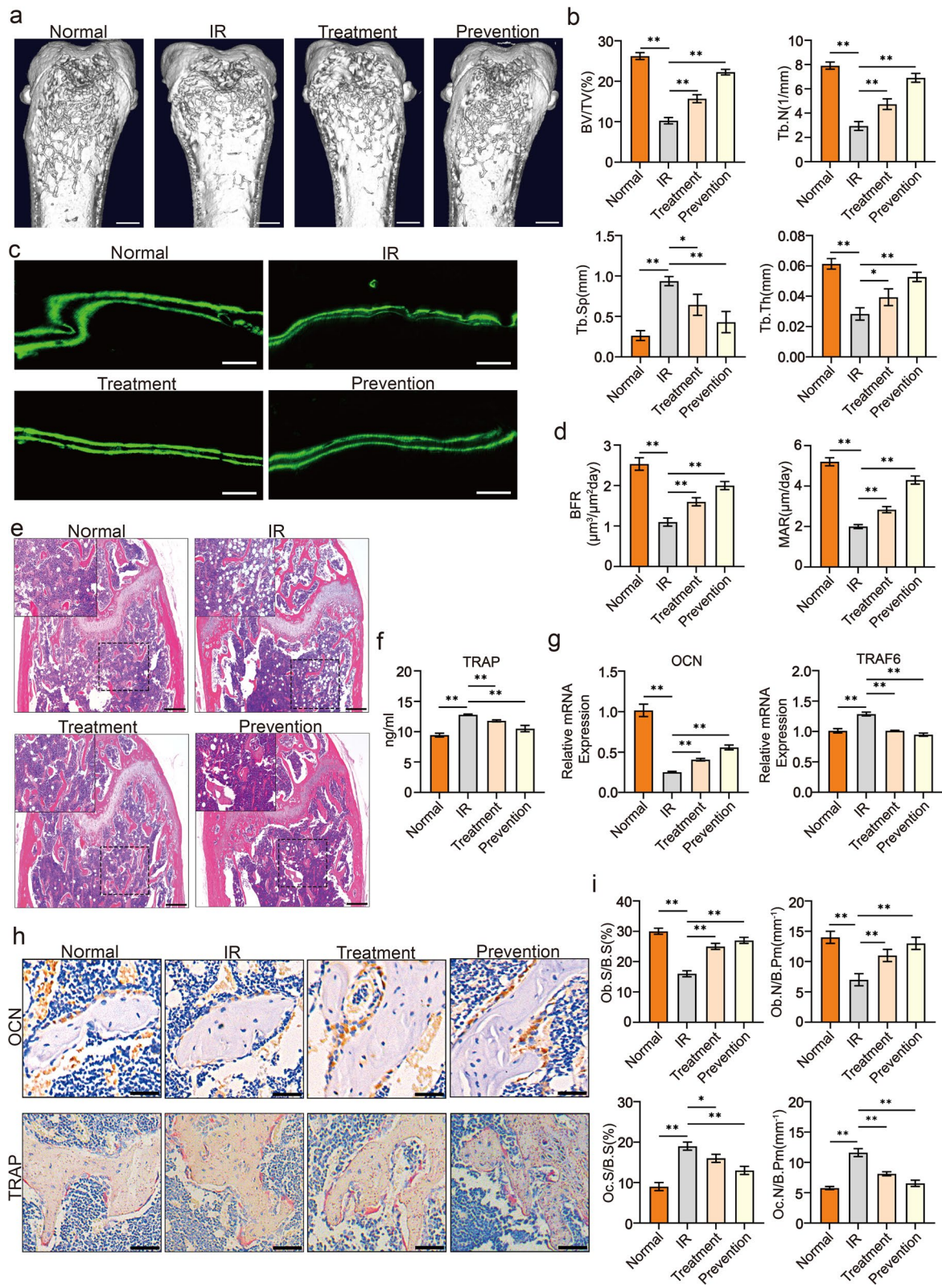
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(See figure on next page.)

**Fig. 1** Psoralen mitigated irradiation-induced osteoporosis in a murine model. For the prevention/treatment group, C57BL/6 N mice (n = 5 per group) were administered psoralen (20 mg/Kg) intragastrically every day for 1 week before/after radiation and killed 1 week after radiation. The representative MicroCT data of femur bones at week 1 post-irradiation are shown in **a** and **b**. The results of BV/TV, Tb.Sp, Tb.Th, and Tb.N demonstrated that irradiation induced significant destruction of the bone structures, while treatment or prevention with psoralen remarkably alleviated the bone injuries (**a** and **b**). In addition, the image of calcein double-labeling analysis and quantitative data of BFR and MAR showed that gastric administration of psoralen promoted new bone formation in irradiated mice (**c** and **d**). The HE staining data further demonstrated that psoralen treatment provided protective effects on the bone structures of irradiated mice (**e**). The ELISA data showed that psoralen treatment reduces the TRAP level in serum of irradiated mice (**f**). Gene expression analysis of TRAF6 and OCN in femurs also suggested that psoralen inhibited osteoclastogenesis while favoring osteogenesis in irradiated mice (**g**). Further pathological analysis showed that psoralen partially restored the irradiation induced the reduction of OCN-labeled OBs and the increase of TRAP-labeled OCs in the irradiated mice (**h** and **i**). All data are shown as the mean  $\pm$  SD. **\*\*** $P < 0.01$ , **\*** $P < 0.05$ . The scale bars represent 2 mm (**a** and **c**), 500  $\mu$ m (**e**), and 200  $\mu$ m (**h**), respectively. IR: irradiation; BV/TV: bone volume per tissue volume; Tb.N: trabecular bone number; Tb.Sp: trabecular separation; Tb.Th: trabecular bone thickness; BFR: bone formation rate; MAR: mineral deposition rate; TRAP: tartrate-resistant acid phosphatase; OCN: osteocalcin; TRAF6: TNF receptor-associated factor 6; Ob.S/B.S: osteoblast surface per bone surface; Ob.N/B.Pm: number of osteoblasts per bone perimeter; Oc.S/B.S: osteoclast surface per bone surface; and Oc.N/B.Pm: number of osteoclasts per bone perimeter



**Fig. 1** (See legend on previous page.)

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