

## Supplementary information

### **M2-polarized macrophage contributes the neovascuogenesis, leading relapse of oral cancer following radiation**

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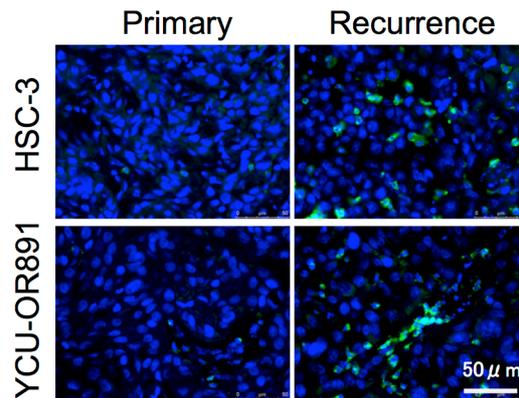
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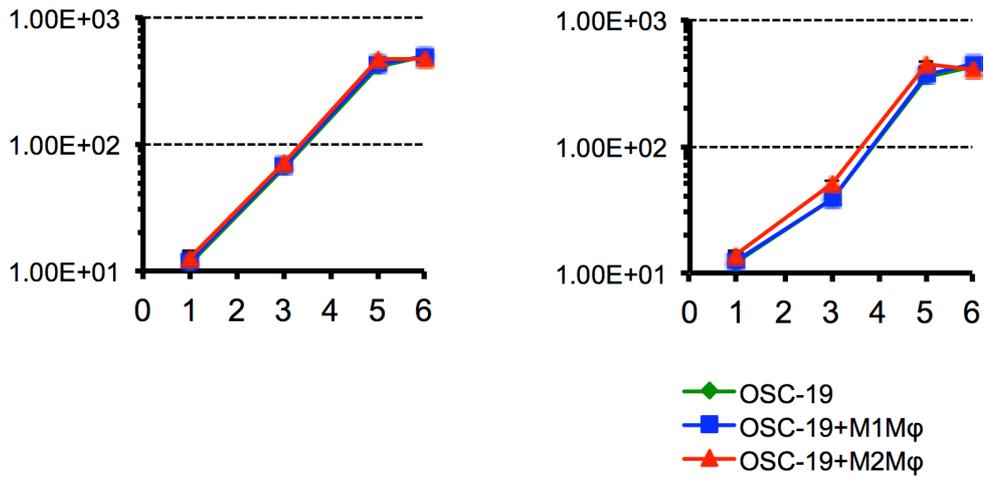
#### Context of supplementary information

1. Supplementary Figures 1-5
2. Supplementary Table 1



**Supplementary Figure S1.**

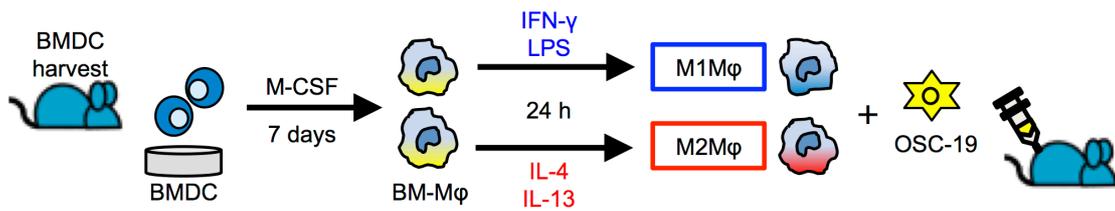
**The representative images of IHC for CD11b<sup>+</sup> myeloid cells in OSCC tumours before and after irradiation.** HSC-3 cells ( $1 \times 10^7$  cells) and YCU-OR891 cells ( $3 \times 10^6$  cells) were s.c. implanted on the back of female BALB/c nude mice, and grown tumours were irradiated in a manner similar to the OSC-19 model. Tumour samples were stained with CD11b antibody.



**Supplementary Figure S2.**

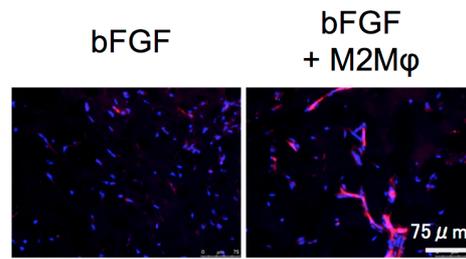
**Co-culture experiment of OSC-19-luc cells and BM-M1Mφs or BM-M2Mφs.**

OSC-19-luc cells ( $6 \times 10^3$  cells) were co-cultured with BM-M1Mφs or BM-M2Mφs (1.5 or  $6 \times 10^3$  cells) in 24 well plates in quadruplicate. Bioluminescent signals were determined using the IVIS system on indicated date. Data shown are means  $\pm$  SD.



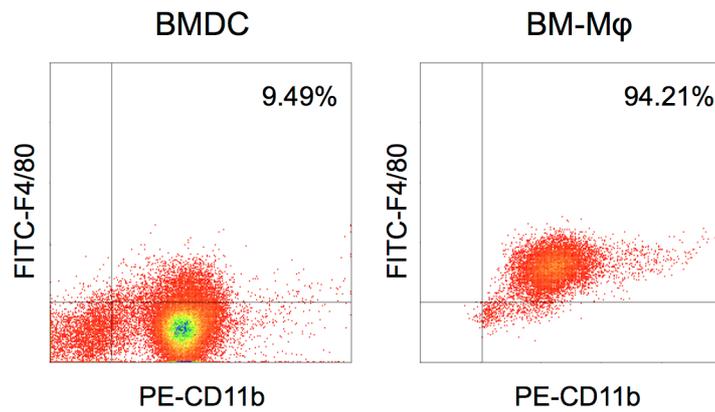
**Supplementary Figure S3.**

**Pattern diagram of the experimental design for co-injection of OSC-19 cells and BM-M1Mφs or BM-M2Mφs.** OSC-19 cells were injected into non-IR or pre-IR sites alone or in the presence of BM-M1Mφs or BM-M2Mφs previously prepared *in vitro*.



**Supplementary Figure S4.**

**Representative image of Matrigel Plug assay.** BM-M2Mφs promoted tube-like formation of CD31<sup>+</sup> endothelial cells (red) in Matrigel plug.



**Supplementary Figure S5.**

**FACS analysis of BMDCs and BM-Mφs.** FACS analysis showed that CD11b<sup>+</sup>F4/80<sup>-</sup>

BMDCs harvested from BALB/c nude mice differentiated into CD11b<sup>+</sup>F4/80<sup>+</sup> BM-Mφs

by extended culture with M-CSF for 7 days. BMDC, bone marrow-derived cell;

BM-Mφs, bone marrow-derived macrophages; M-CSF, macrophage colony-stimulating

factor.

	<b>Forward 5' ⇒ 3'</b>	<b>Reverse 5' ⇒ 3'</b>	<b>Product length</b>
IL-6	GACAAAGCCAGAGTCCTTCAGAGAG	CTAGGTTTGCCGAGTAGATCTC	228(bp)
iNOS	TTTGCTTCCATGCTAATGCCAAAG	GCTCTGTTGAGGTCTAAAGGCTCCG	600
Arg I	CAGAAGAATGGAAGAGTCAG	CAGATATGCAGGGAGTCACC	249
CD206	GCAAATGGAGCCGTCTGTGC	CTCGTGGATCTCCGTGACAC	300
MMR	AGCTACCATGGCATGAAGCAGAGA	ACCCATTCTGAAGGCATTCCAGAGA	464
IL-13R $\alpha$ 2	CGCATTGTGTCAGAGCATTGT	CCAAGCCCTCATACCAGAAA	216
GAPDH	TATGTCGTGGAGTCTACTGGT	GAGTTGTCATATTCTCGT	149

**Supplementary Table S1.**

**Primer sequences specification for RT-PCR.**