

Supplemental Material

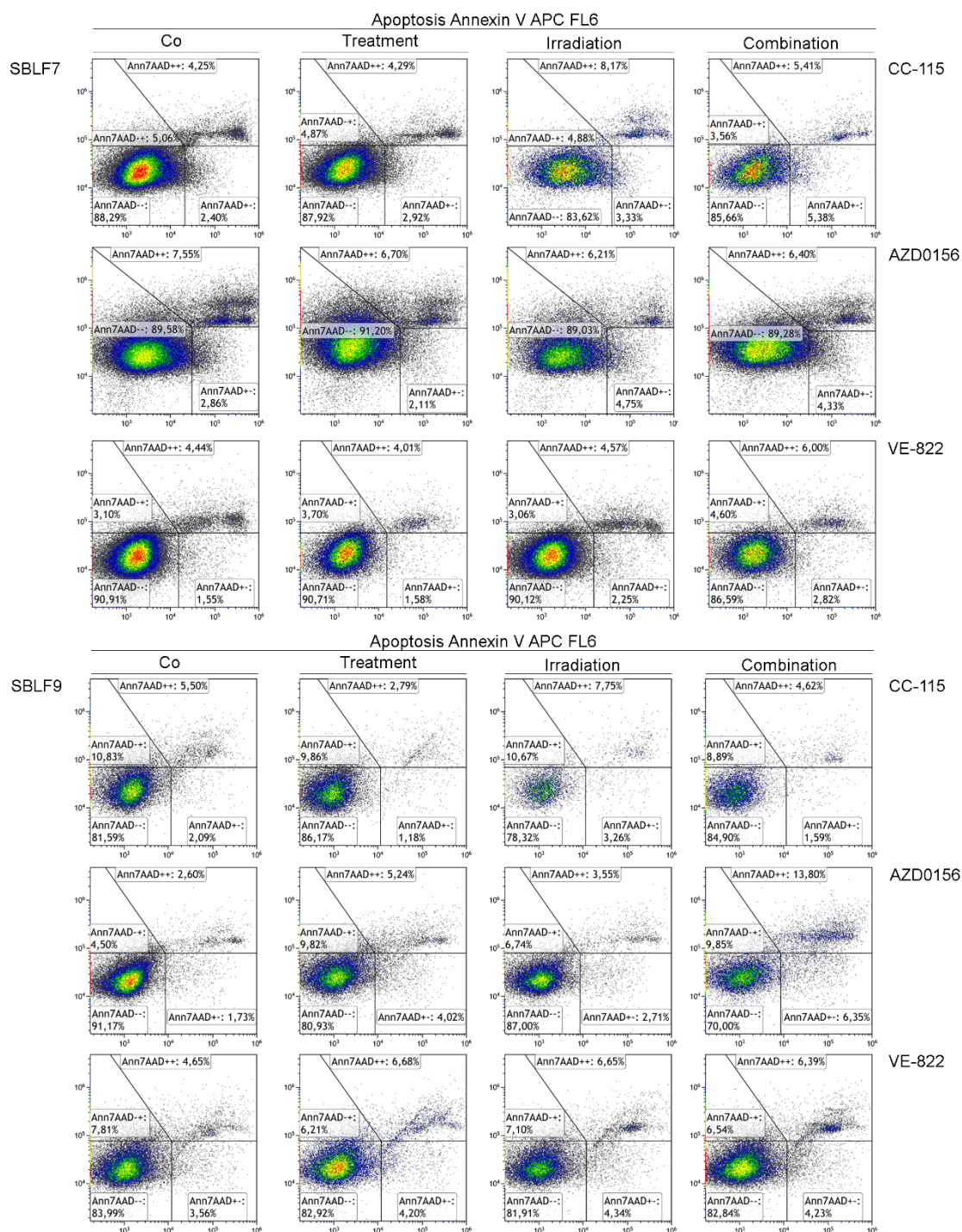


Figure S1. Representative dot plots of Annexin V/7AAD cell death staining of the healthy fibroblasts SBLF7 and SBLF9. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination).

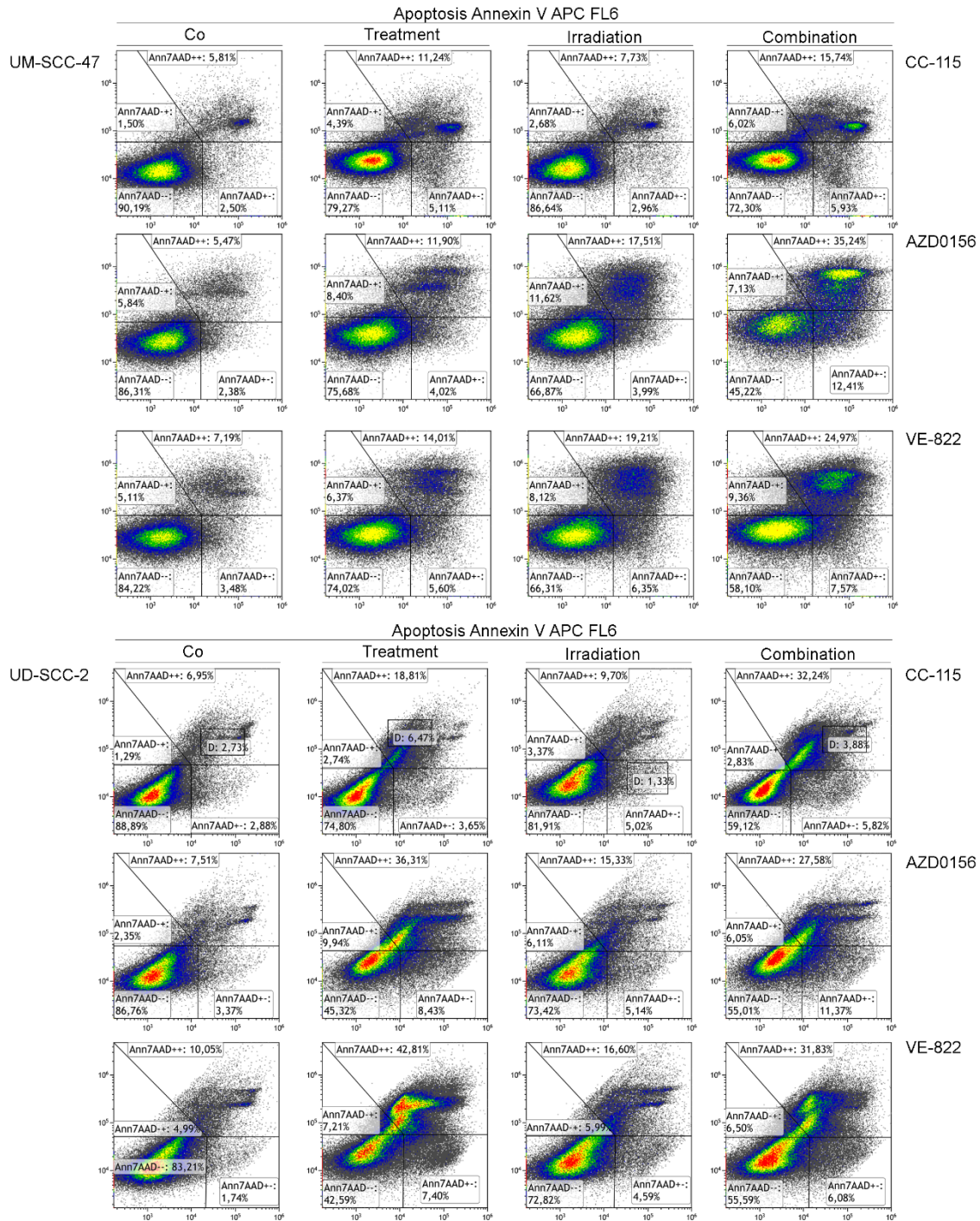


Figure S2. Representative dot plots of AnnexinV/7AAD cell death staining of the HPV-positive HSC4 and Cal33. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination).

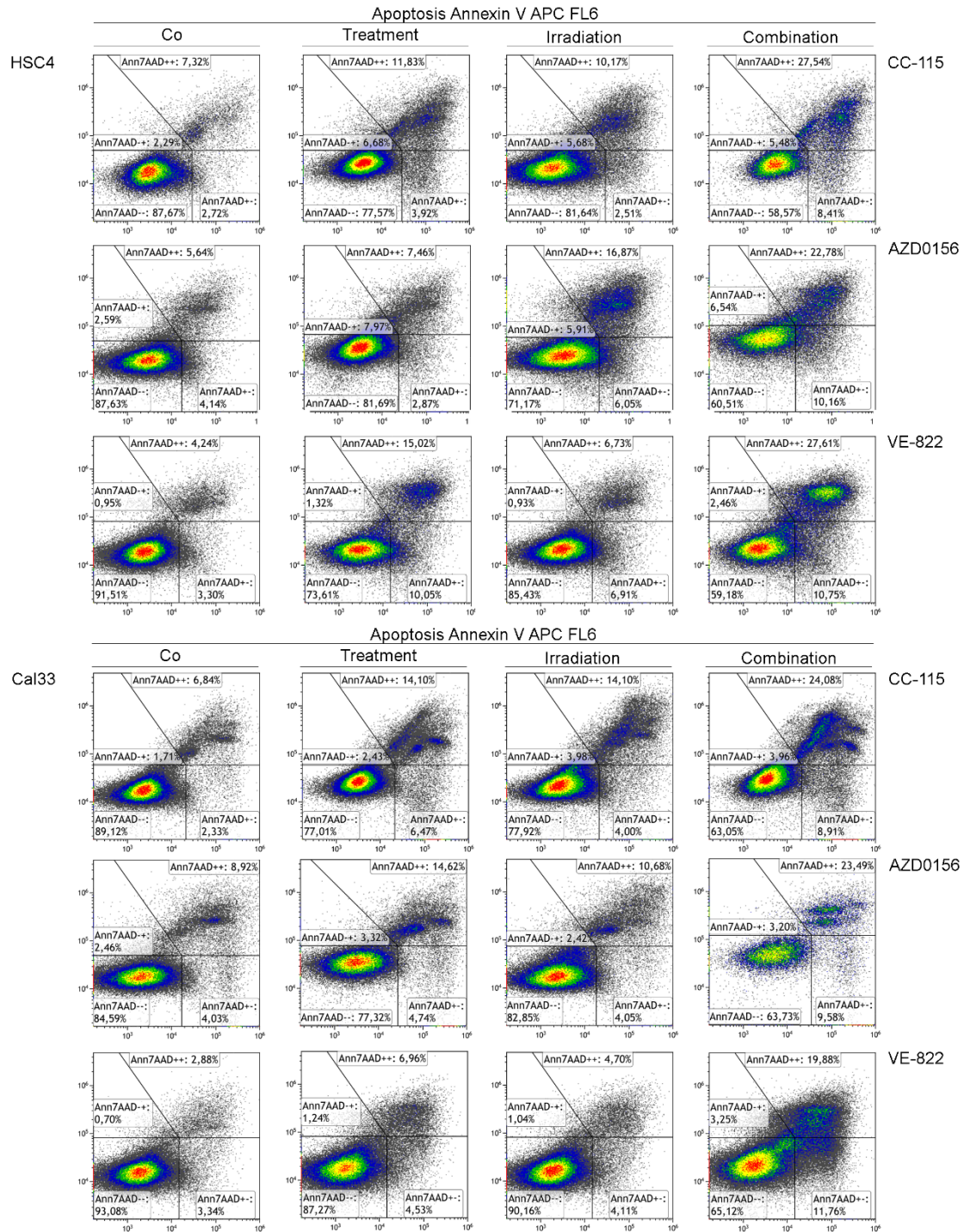


Figure S3. Representative dot plots of AnnexinV/7AAD cell death staining of the HPV-negative UM-SCC-47 and UD-SCC-2. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination).

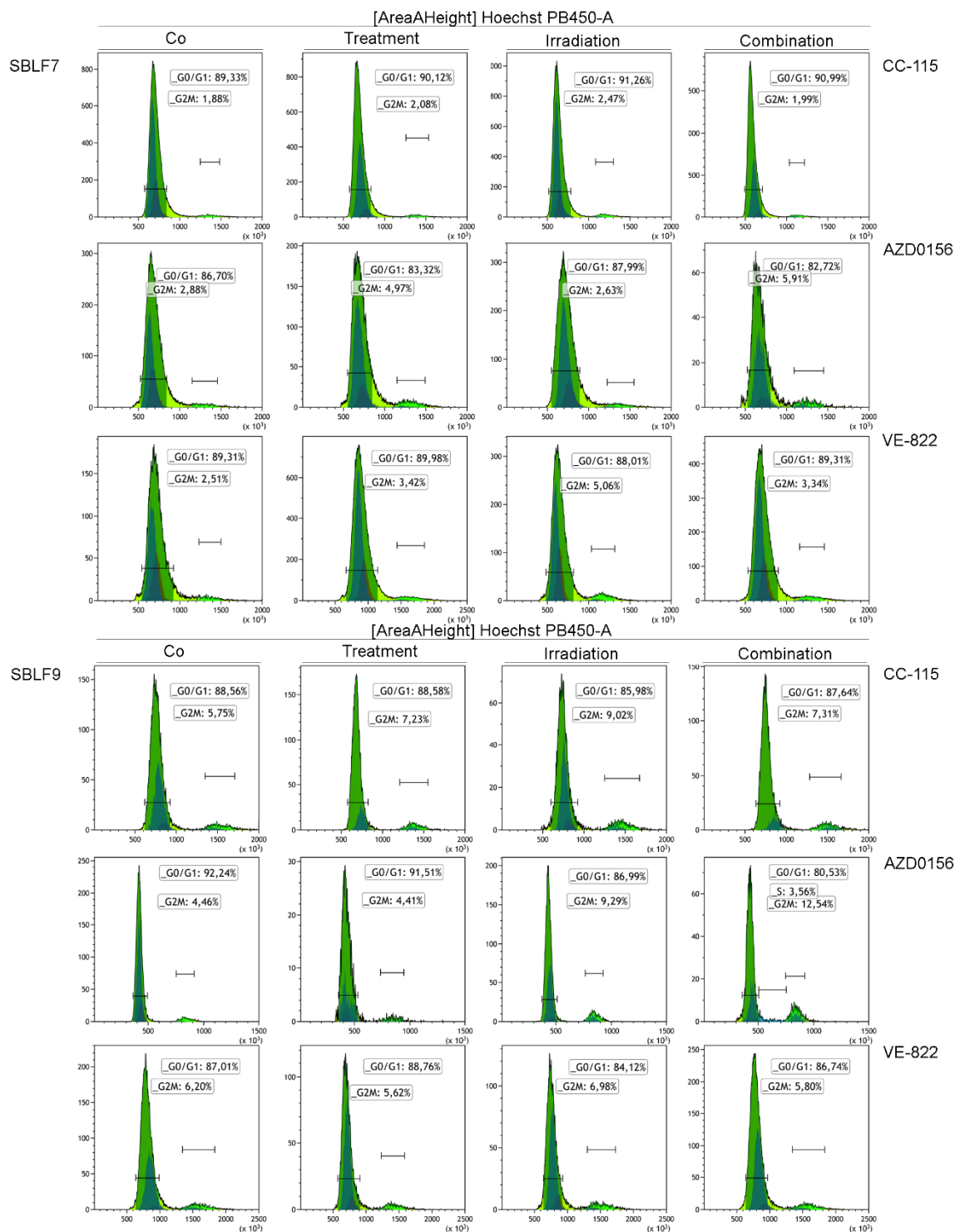


Figure S4. Representative histograms of Hoechst (DNA) cell cycle staining of the healthy fibroblasts SBLF7 and SBLF9. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination).

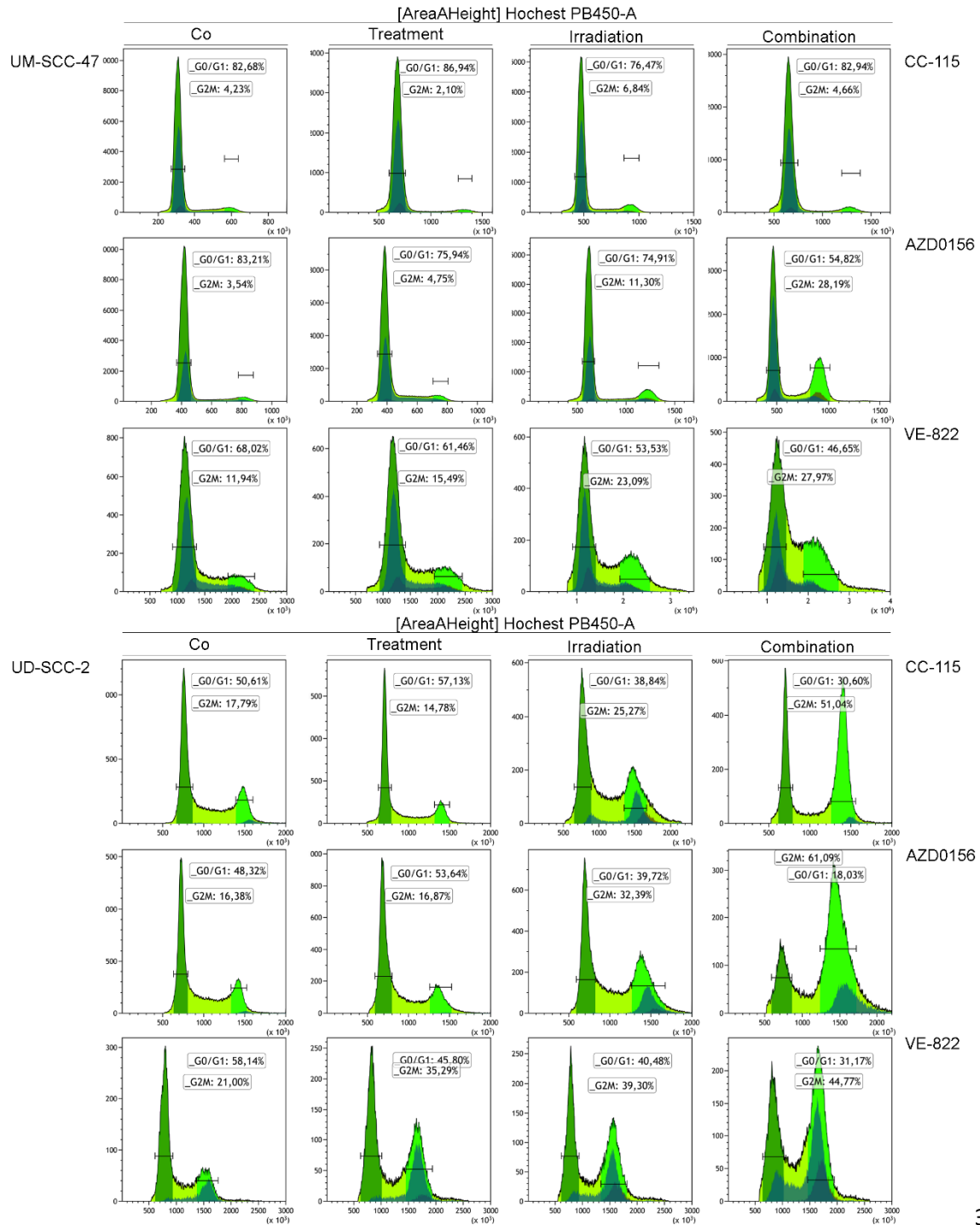


Figure S5. Representative histograms of Hoechst (DNA) cell cycle staining of the HPV-positive HSC4 and Cal33. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination).

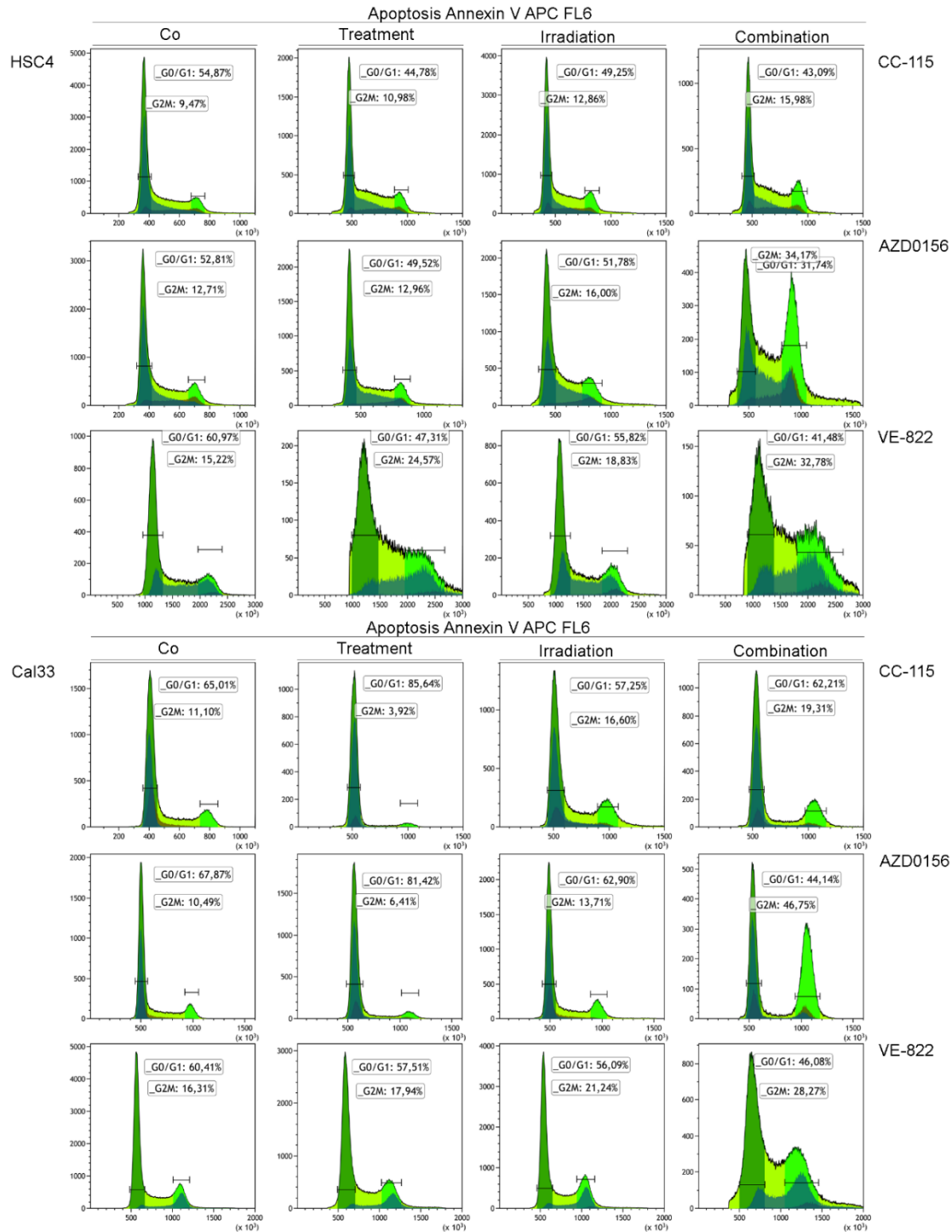


Figure S6. Representative histograms of Hoechst (DNA) cell cycle staining of the HPV-negative HSC4 and Cal33. Cells were treated with CC-115 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination), AZD0156 (no inhibitor, 1 μ M, 2 Gy irradiation, 1 μ M + 2 Gy combination) or VE-822 (no inhibitor, 0.1 μ M, 2 Gy irradiation, 0.1 μ M + 2 Gy combination)

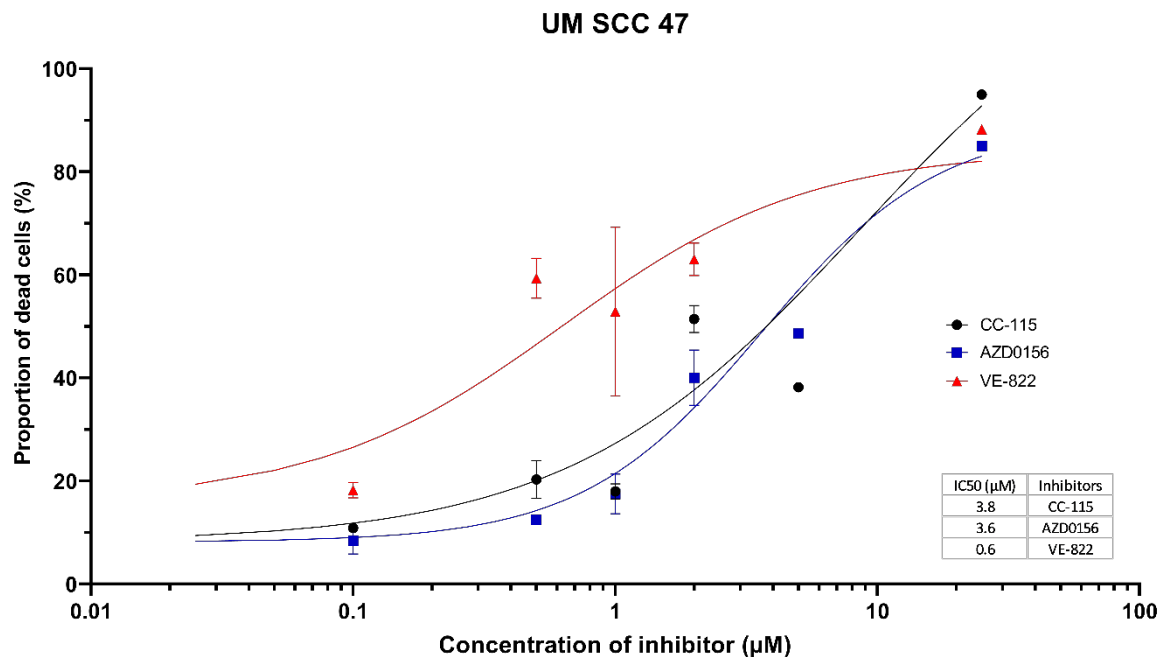


Figure S7. Dose escalation study for the induction of apoptosis or necrosis (cell death) by the inhibitors CC 115, AZD0156 and VE 822 conducted on HPV-positive cell line UM-SCC-47. Each value represents mean \pm SEM.

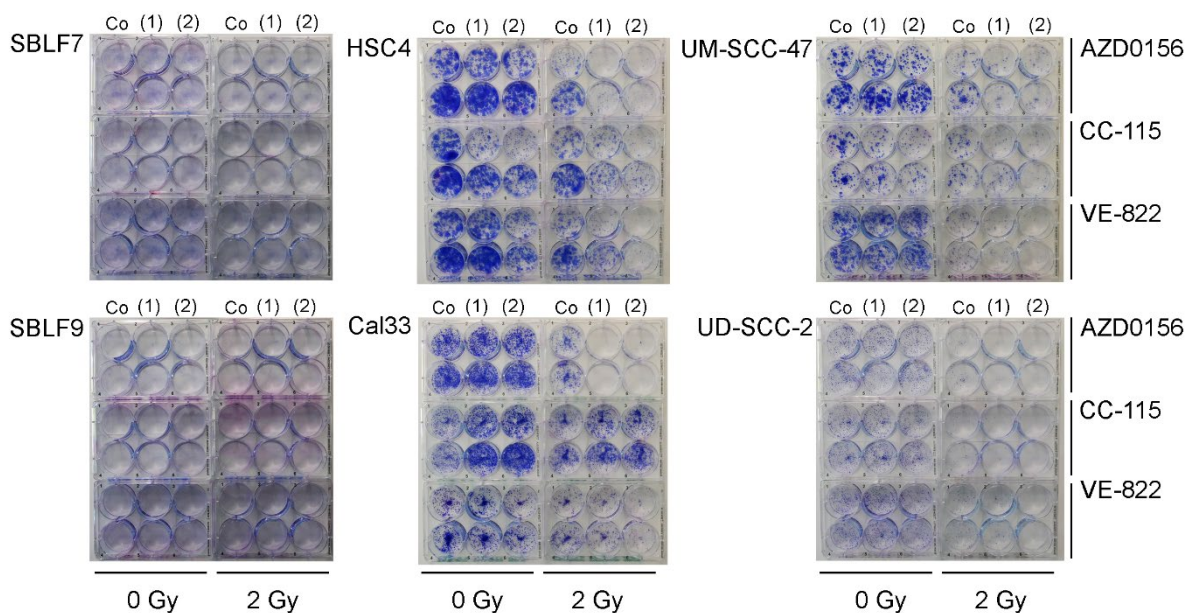


Figure S8. Colony forming assay. Representative images of all tested cell lines (healthy: SBLF7, SBLF9; HPV-neg: HSC4, Cal33; HPV-pos: UM-SCC-47, UD-SCC-2) and inhibitor (AZD0156: ATMi; CC-115: DNA-PKi, VE-822: ATRi). Cells were treated with different concentrations of inhibitors (Co: no inhibitor; (1): 5 nM AZD0156, 0.5 μM CC-115, 0.05 nM VE-822; (2): 10 nM AZD0156, 1 μM CC-115, 0.1 nM VE-822). Experiments were seeded in technical replicates (Well 1-3 and well 4-6). In case of healthy fibroblasts, typical morphology of cells leads to slightly stained colonies. Therefore, microscopical counting was done.

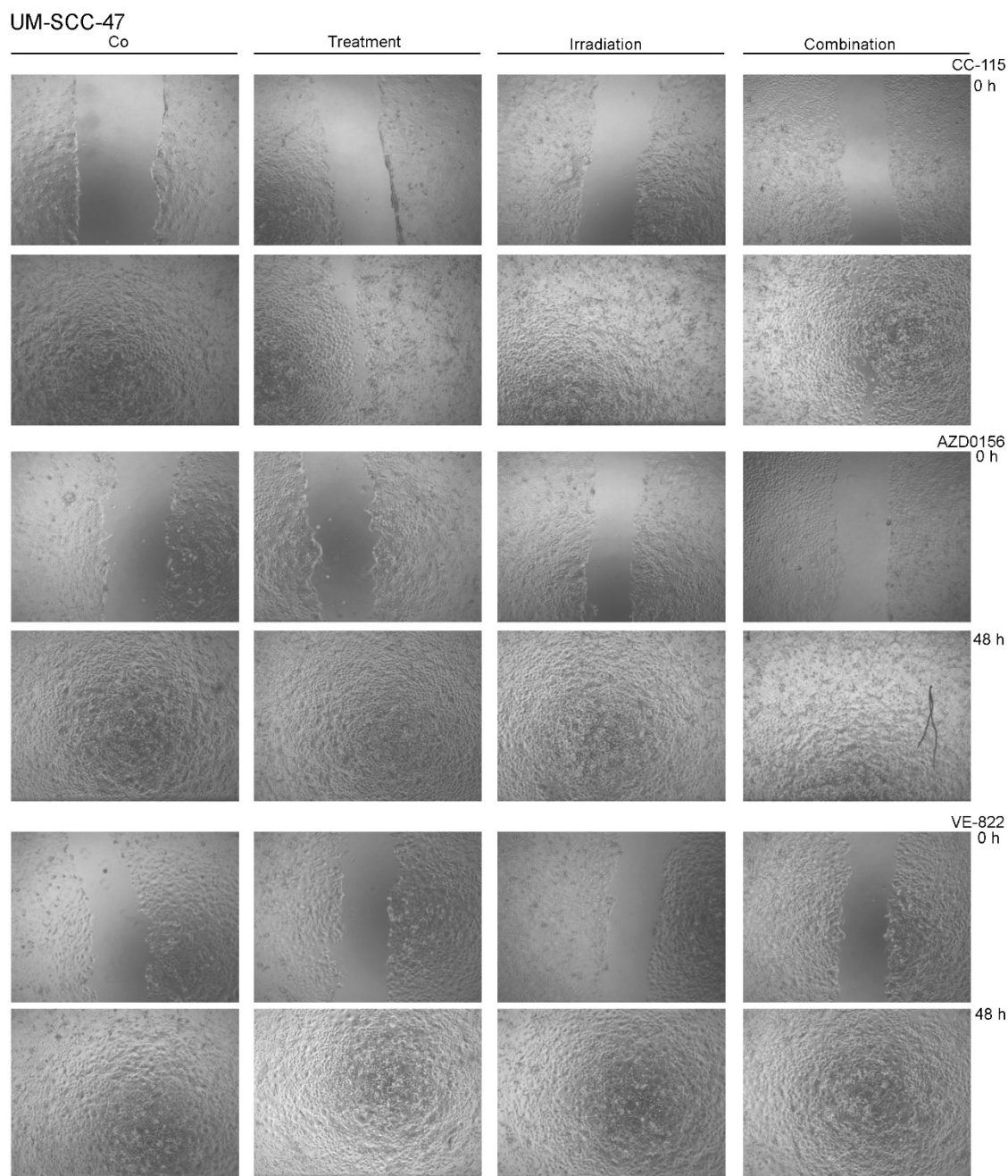


Figure S9. Representative images of wound healing assay of HPV-positive cell line UM-SCC-47 at time points 0 h and 48 h. Cell were treated either without any treatment, with inhibitor (1 μ M CC-115, 1 μ M AZD0156 and 0.01 μ M VE-822), 2 Gy dose or a combination of inhibitor and 2 Gy.

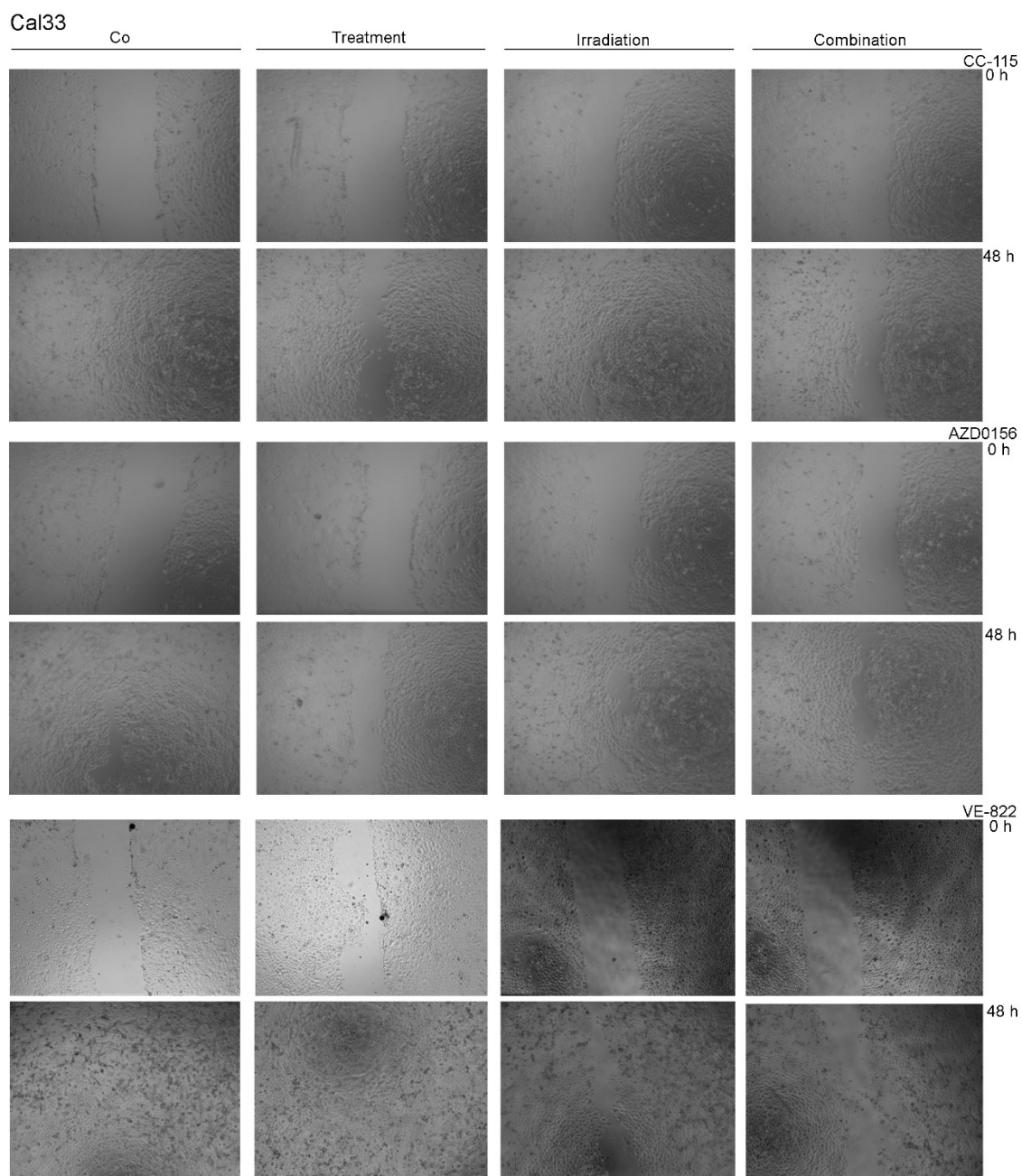


Figure S10. Representative images of wound healing assay of HPV-negative cell line Cal33 at time points 0 h and 48 h. Cells were treated either without any treatment, with inhibitor (1 μ M CC-115, 1 μ M AZD0156 and 0.01 μ M VE-822), 2 Gy dose or a combination of inhibitor and 2 Gy.

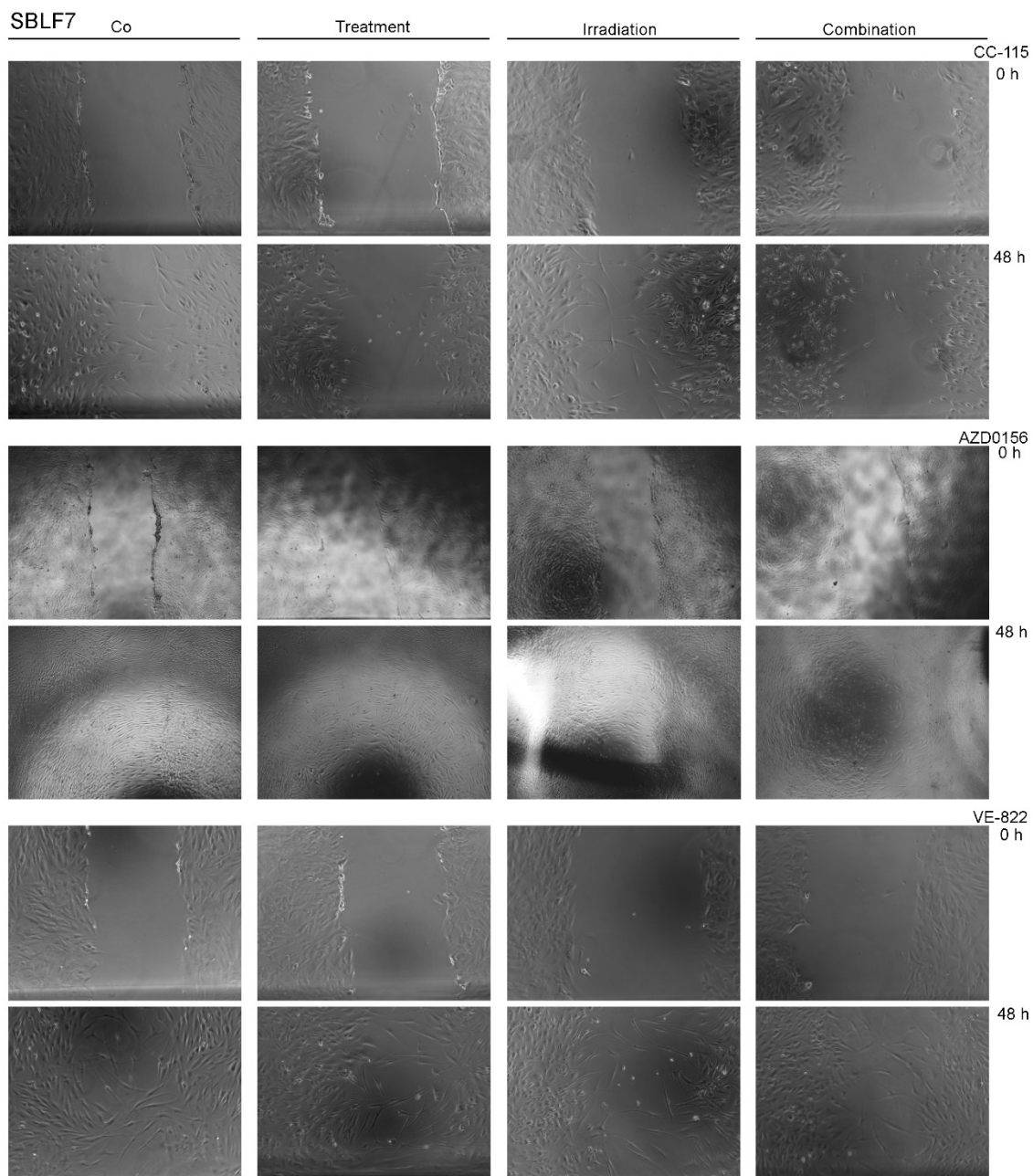


Figure S11. Representative images of wound healing assay of healthy control cell line SBLF7 at time points 0 h and 48 h. Cells were treated either without any treatment, with inhibitor (1 μ M CC-115, 1 μ M AZD0156 and 0.01 μ M VE-822), 2 Gy dose or a combination of inhibitor and 2 Gy.