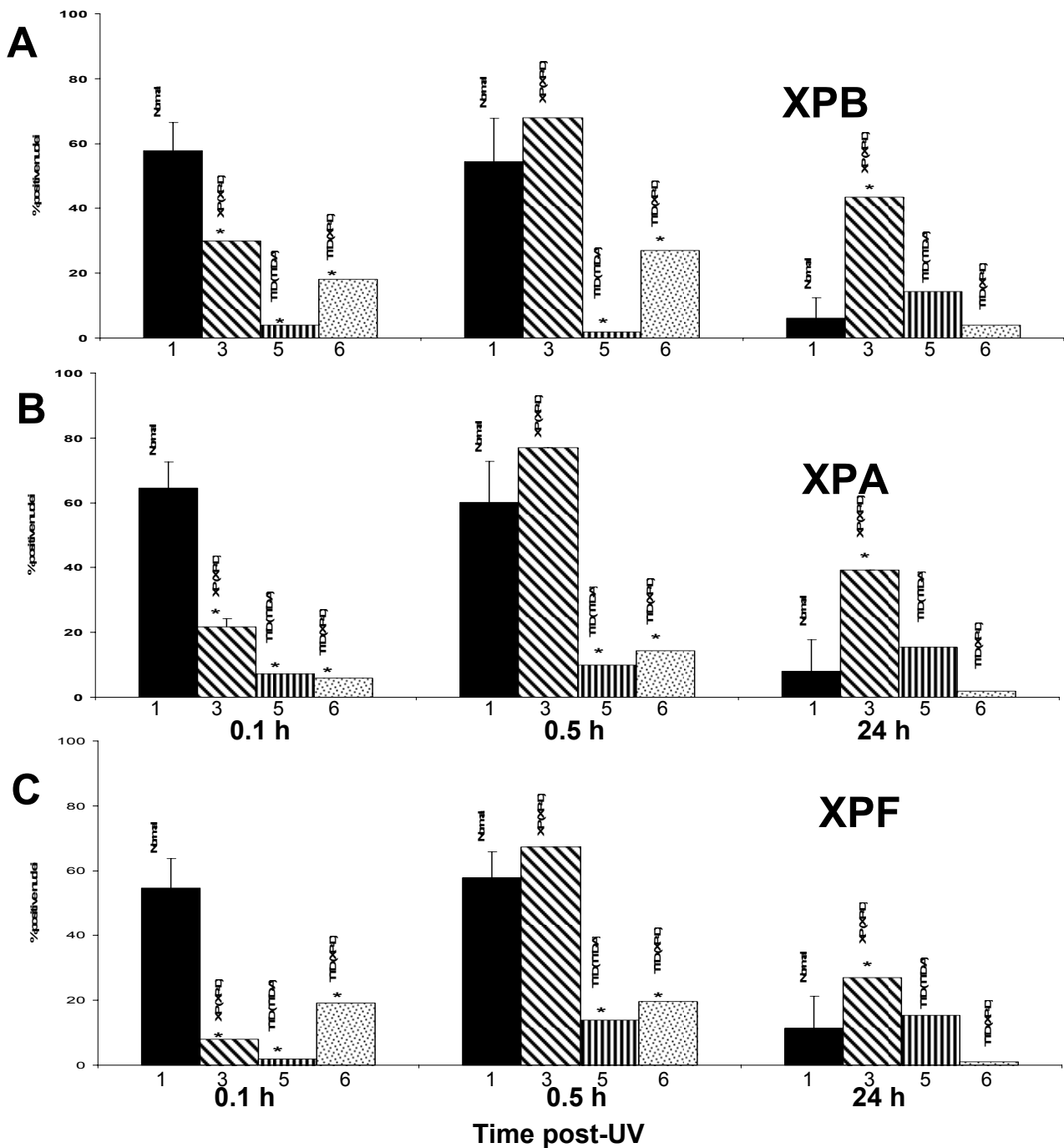
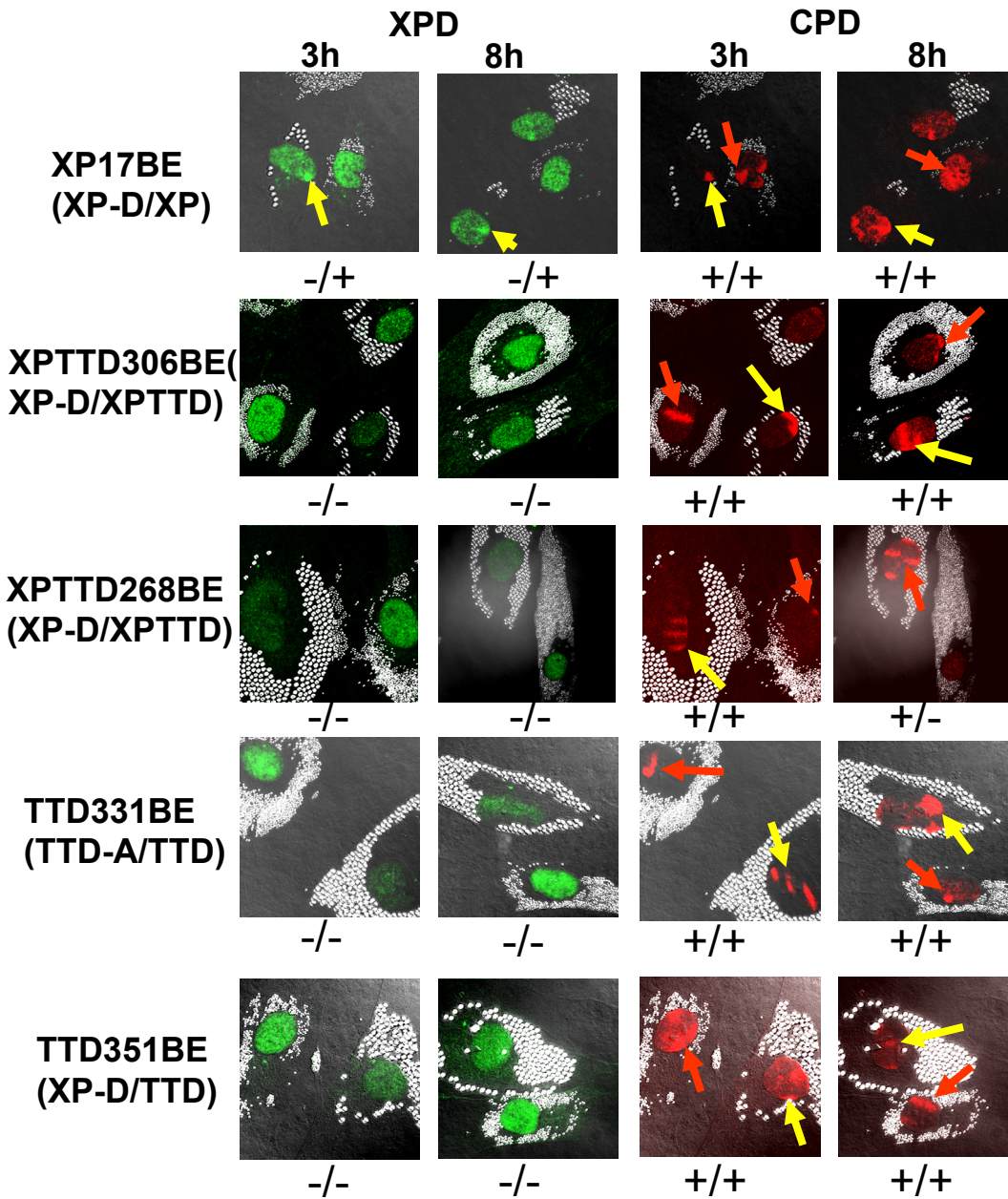


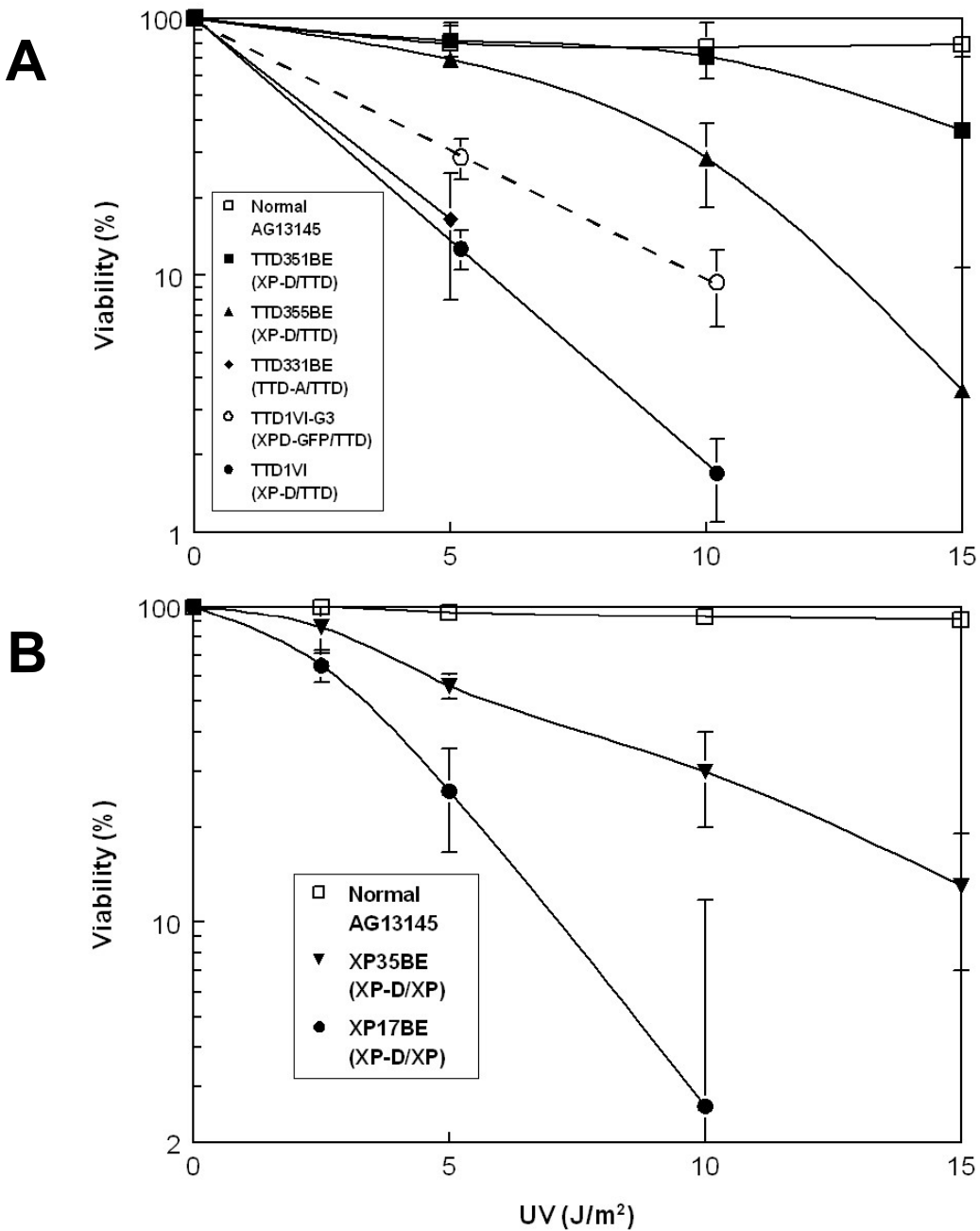
Supplemental Figure S1. Recruitment of NER proteins XPB, XPG, XPA, and XPF to localized UV damage 0.5h post UV-irradiation. Cells were labeled with latex beads as for Figure 2. Cells were fixed 0.5h post-irradiation and immunostained for 6-4PP, XPB, XPG, XPA, and XPF. The arrows indicate sites of localized immunostaining: normal - red arrows, patient - yellow arrows. Symbols below each image indicate localization (+) or non-localization (-) of NER proteins or photoproducts in normal cells/patient cells. Details as for Figure 2.



Supplemental Figure S2. Frequency of XPB, XPA and XPF NER protein localization in XP and TTD cells at 0.1h, 0.5h, and 24h following UV irradiation. Experimental details as in Figure 3. A. XPB localization B. XPA localization, C. XPF localization. Where shown, error bars indicate the standard error of the mean of at least 2 independent counts. * $p < 0.001$ significant difference between patient cell count and normal cell count at the equivalent time post-irradiation. Bar numbers: 1-AG13145, 3-XP17BE, 5-TTD331BE, and 6-TTD351BE.



Supplemental Figure S3. Persistent localization of XPD in XP (XP-D) and non-localization of XPD in TTD (XP-D and TTD-A) and XP/TTD (XP-D) cells 3h and 8h following UV irradiation. Cells were labeled with latex beads as for Figure 2. Cells were fixed 3h and 8h post-irradiation and immunostained for CPD and XPD. The arrows indicate sites of localized immunostaining: normal - red arrows, patient - yellow arrows. Symbols below each image indicate localization (+) or non-localization (-) of NER proteins or photoproducts in normal cells/patient cells. Details as for Figure 2.



Supplemental Figure S4. Post UV-viability of TTD, XP and normal cell lines. Cell cultures were exposed to the indicated dose of UV and post-UV viability was assessed after 4 days using an MTS assay. **A.** Normal (AG13145), TTD351BE (XP-D/TTD), TTD355BE (XP-D/TTD), TTD331BE (TTD-A/TTD), TTD1VI (SV40 transformed XP-D/TTD) and TTD1VI-G3 (SV40 transformed XP-D/TTD transfected with XPD-GFP) cells. **B.** Normal (AG13145), XP35BE (XP-D/XP) and XP17BE (XP-D/XP) cells.