Supplementary Data – MacKenzie Ross et al.

Contents: 1 table and 3 figures with legends

Supplementary Table 1. Numbers of successfully immunostained lesions by antibody and diagnostic category

Antibody	BCN	BIN	DN	MIS	MIV	VGP
pCHEK2(Thr68)	10[1]	14	12	11	12	17
p-p53(Ser20)	10	14	10	11	12	17
p16	9	14	10	10	12	17
nucleolin	9	13	10	11	11	16
p21	9	14	9	10	12	16

[1]For each antibody and diagnostic category the number of lesions successfully stained and with interpretable results is shown.

Supplementary Figure legends

Figure S1. Established ATM/CHEK2 pathways: summary. P indicates phosphorylation; arrows mean activation and T-bars mean inhibition. Pathways in black are normal; those in red are activated in DNA damage signaling and short-telomere-mediated cell senescence.

Figure S2. Supporting data for Figure 2. b, d, f and h show RGB blue channel for images a, c, e and g. Scale bar for (a-i), 50 μm and for (j-k), 10 μm. (a, b) control section of BIN seen in Figure 2a and b. Virtually no brown color. (c,d) Control section of VGP seen in Figure 2c-f. Fine cytoplasmic melanin granulation present in the melanoma cell groups. (e,f) pCHEK2 present in many normal epidermal cells near a BIN; subnuclear foci (arrow) or sometimes pan-nuclear in stratum spinosum. (g,h) p-p53 in same area of epidermis. About 1-4 subnuclear foci per cell. (i) 10 or more p-p53-positive foci per cell in part of a VGP melanoma (blue channel only shown). (j, k) Higher magnification of mitotic cells, positive for foci of (j) pCHEK2 and (k) p-p53 (arrows). The foci are generally associated with the chromosomes, at peripheral positions consistent with telomeres.

Figure S3. RGB blue channel from all panels of Figure 4. To emphasize immunostain.

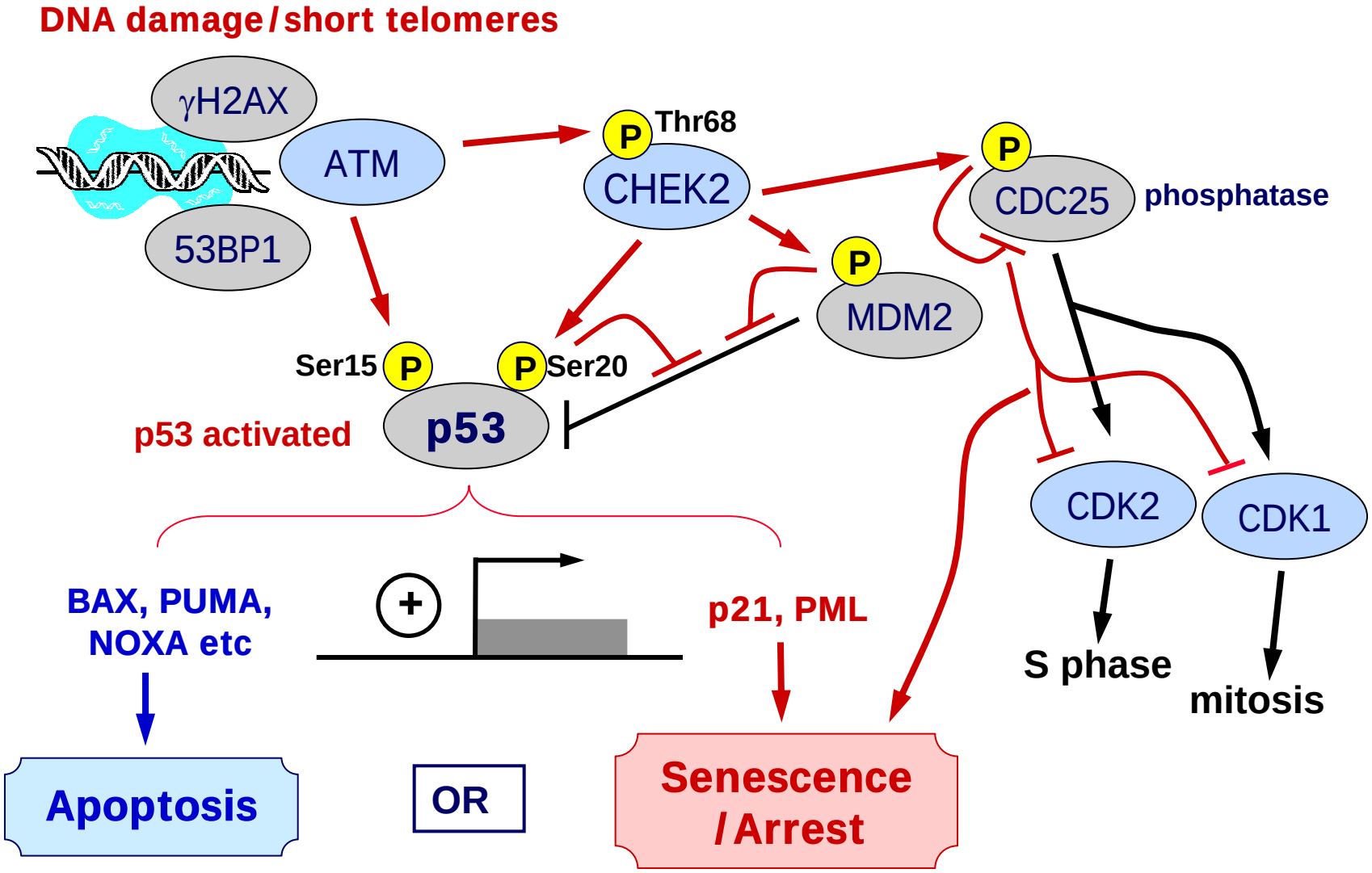

Figure S1: Established ATM/CHEK2 pathways: summary.

Figure S2

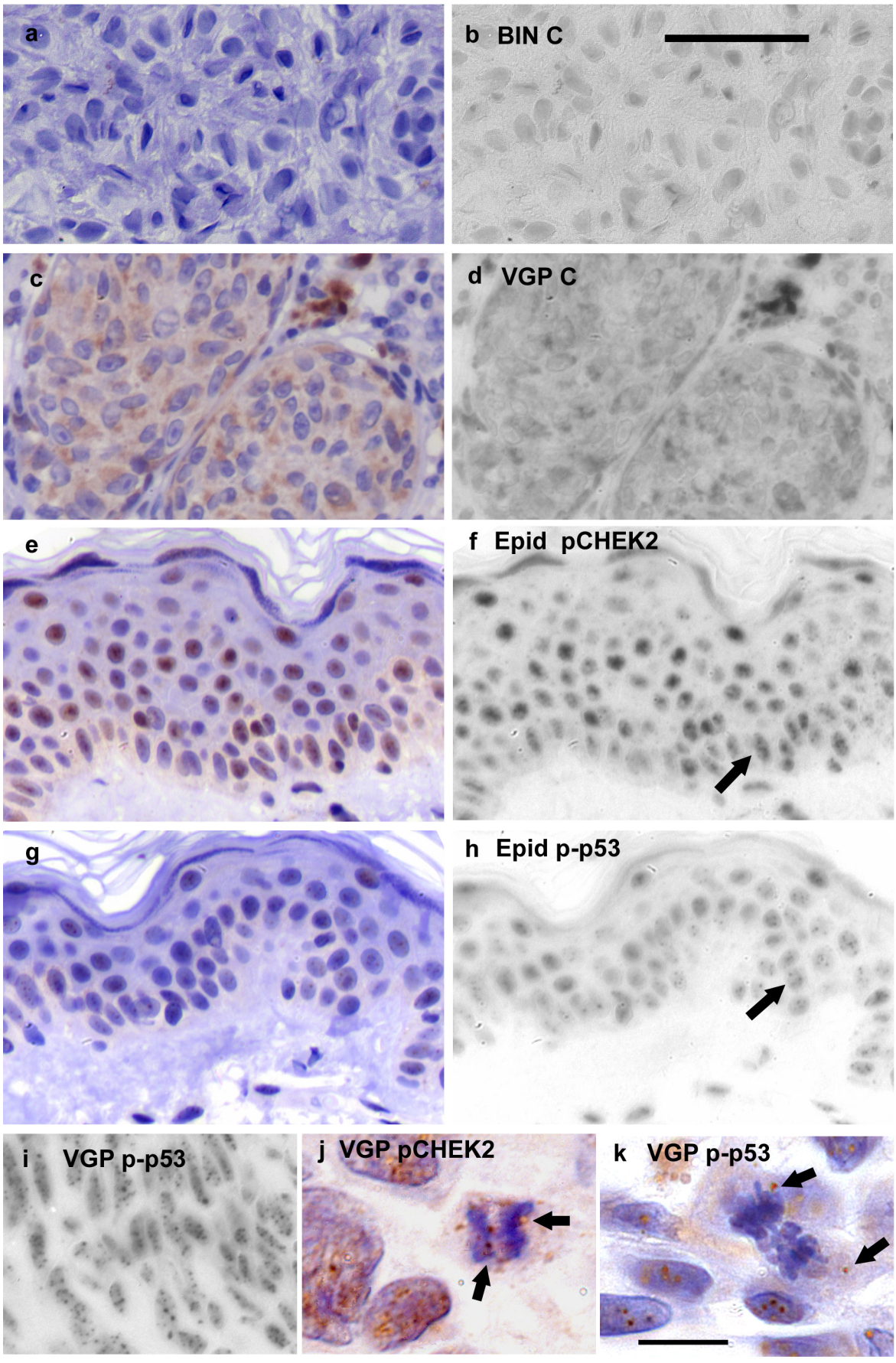
a
b BIN C
c
d VGP C
e
f Epid pCHEK2
g
h Epid p-p53
i VGP p-p53
j VGP pCHEK2
k VGP p-p53

Figure S3