

**Supplemental Table 1. Gene Variant Functions and Carrier Frequencies by Race**

Gene and SNP Nucleotide Designation	Gene Function/ Variant Function	European Americans (205)		African Americans (205)	
		Carrier Frequency (n)	Proportion Missing (n) <sup>c</sup>	Carrier Frequency (n)	Proportion Missing (n) <sup>c</sup>
COMT Val158Met (rs4680)	Metabolism of estrogens and neurotransmitters/ <b>Decreased enzyme activity</b>	0.663 (136) <sup>a</sup>	0.078 (16)	0.473 (97) <sup>a</sup> p<.001 <sup>d</sup>	0.166 (34)
CYP3A4*1 B (rs2740574)	Metabolism and hydroxylation of estrogens, activation of tobacco-related toxins/ <b>Increased metabolic activity</b>	0.07 (14) <sup>a</sup>	0.008 (16)	0.693 (142) <sup>b</sup> p<.001 <sup>d</sup>	0.122 (25)
CYP1B1*3 (Leu432Val, rs1056836)	Metabolism and hydroxylation of estrogens, highly expressed in the ovary, induced by tobacco and involved in metabolic activation of smoking toxins/ <b>Increased metabolic activity</b>	0.620 (127) <sup>a</sup>	0.008 (16)	0.839 (172) <sup>a</sup> p<.001 <sup>d</sup>	0.102 (21)
CYP1B1*4 (Asn452Ser, rs1800440)	Metabolism and hydroxylation of estrogens/ <b>Increased metabolic activity</b>	0.263 (54) <sup>a</sup>	0.008 (17)	0.102 (21) <sup>a</sup> p<.001 <sup>d</sup>	0.102 (21)

<sup>a</sup>Indicates no deviation from Hardy-Weinberg proportions at the  $P < .05$  level

<sup>b</sup>Indicates deviation from Hardy-Weinberg proportions

<sup>c</sup>Proportions of participants for whom genotyping could not be performed or testing could not be performed due to insufficient data

<sup>d</sup> $P$  value for difference in carrier frequency across race