

LIST OF ABBREVIATIONS

α -Me- γ -OH-PdG	α -Methyl- γ -hydroxy-1, <i>N</i> ² -propanodeoxyguanosine
16 α -OHE1	16- α -hydroxyestrone
1-OHP or 1-HOP	1-hydroxypyrene
ADH	alcohol dehydrogenase
AEAT	acyl-coenzyme A: ethanol O-acyltransferase
AFRO	WHO African Region
AhR	aryl-hydrocarbon receptor
AIDS	acquired immunodeficiency syndrome
AKR	aldo-keto reductase
ALDH	aldehyde dehydrogenase
AMRO	WHO Region of the Americas
<i>Apc</i>	adenomatous polyposis coli
BaP	benzo[<i>a</i>]pyrene
BMI	body mass index
CalEPA	California Environmental Protection Agency
CDH1	E-cadherin 1
CHEK	checkpoint
CI	confidence interval
CIMP	CpG island methylator phenotype
CML	chronic myeloid leukaemia
COX-2	cyclooxygenase-2
CPS-I	American Cancer Society Cancer Prevention Study I
CPS-II	American Cancer Society Cancer Prevention Study II
CYP	cytochrome P450
DMBA	7,12-dimethylbenz[<i>a</i>]anthracene
DMSO	dimethyl sulfoxide
DRR	direct reversal repair
EBV	Epstein-Barr virus
EGFR	Epidermal growth factor receptor
EHPX	Microsomal epoxide hydrolase
ELISA	enzyme linked immunosorbent assay
EMRO	Eastern Mediterranean Region
EPIC	European Prospective Investigation into Cancer and Nutrition
ERCC	excision repair cross-complementing protein
ER	estrogen receptor
EURO	WHO European Region
FAEE	fatty-acid ethyl ester

FAEES	fatty-acid ethyl ester synthases
FISH	fluorescence in situ hybridization
GSHS	Global School based Student Health Survey
GST	glutathione-S-transferase
GYTS	Global Youth Tobacco Survey
Hb	haemoglobin
HBSC	Health Behaviour in School Aged Children
HCS	high dose cigarette smoke
HEMA	2-hydroxyethyl mercapturic acid
HER	human epidermal growth factor receptor
HPB	4-hydroxy-1-(3-pyridyl)-1-butanone
HPLC	high pressure liquid chromatography
HPMA	3-hydroxypropyl mercapturic acid
HPV	human papillomavirus
HR	hazard ratio
HRT	hormone replacement therapy
IGF-2	insulin-like growth factor-2
iso-NNAC	4-(methylnitrosamino)-4-(3-pyridyl)butyric acid
LC-MS/MS	liquid chromatography-tandem mass spectrometry
LCS	low dose cigarette smoke
LOH	loss of heterozygosity
MA	mercapturic acid
MGMT	O ⁶ -methylguanine DNA methyl-transferase
MHBMA	monohydroxybutyl mercapturic acid
MHL1	mutL homologue 1
MINT	methylation in tumour
MNBA	4-(methylnitrosamino)butyric acid
MNPA	3-(methylnitrosamino)propionic acid
MNPhPA	2-(methylnitrosamino)-3-phenylpropionic acid
MNTCA	N-nitroso-2-methylthiazolidine-4-carboxylic acid
MPO	myeloperoxidase
N ² EtdG	N ² -ethyl-2'-deoxyguanosine
N ² EtidG	N ² -ethylidene-2'-deoxyguanosine
N ² -Dio-dG	N ² -(2,6-demethyl-1,3-dioxan-4-yl)deoxyguanosine
NAA	N-nitrosamino acid
NADH	nicotinamide adenine dinucleotide
NADPH	nicotinamide adenine dinucleotide phosphate
NAT	N-acetyltransferase
NAzCA	N-nitrosoazetidine-4-carboxylic acid
NDEA	N-nitrosodiethylamine
NDMA	N-nitrosodimethylamine
NER	nucleotide excision repair
NHL	non-Hodgkin lymphoma
NHPRO	N-nitrosohydroxyproline
NIH-AARP	National Institutes of Health American Association of Retired People
NNAL	4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol
NNK	4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone
NNN	N'-nitrosornicotine
NO	nitric oxide
NPIC	N-nitrosopipelic acid

NPIP	N-nitrosopiperidine
NPRO	N-nitrosoproline
NPYR	N-nitrosopyrrolidine
NQO	NAD(P)H quinone oxidoreductase
NTCA	N-nitrosothiazolidine- 4-carboxylic acid
OR	odds ratio
PAHs	polycyclic aromatic hydrocarbons
PGE2	prostaglandin
PheT	<i>r</i> -1, <i>t</i> -2,3, <i>c</i> -4-tetrahydroxy-1,2,3,4-tetrahydrophenanthrene
PhIP	2-amino-1-methyl-6-phenylimidazo[4,5,6]pyridine
PM	particulate matter
PM ₁₀	inhalable particles <10 μm
PM _{2.5}	respirable particles <2.5 μm
POB	pyridyloxobutyl
PR	progesterone receptor
RFLP	restriction fragment length polymorphism
RR	relative risk
SEARO	WHO South-East Asian Region
SEER	National Cancer Institute's Surveillance, Epidemiology, and End Results program
SFRP	soluble Frizzled receptor protein
SIR	standardized incidence ratio
SNPs	Single Nucleotide Polymorphisms
SPMA	S-phenyl mercapturic acid
SULT	sulfotransferase
TGF-α	transforming growth factor- α
total NNAL	NNAL and its glucuronides
total NNN	NNN and its glucuronides
TSNA	tobacco-specific N-nitrosamines
TSP	total suspended particles
UDP	uridine diphosphate
UGT	Uridine-5'-diphosphate glucuronosyl transferase (also called uridine-5'-diphosphate glycosyltransferase)
WHO FCTC	WHO Framework Convention on Tobacco Control
WLM	work-level-months
WPRO	WHO Western Pacific Region
XP	Xeroderma pigmentosum
XRCC	X-ray repair cross-complementing protein

