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Ionizing radiation biomarkers in epidemiological studies - An update

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Fig 3: Biomarker detectability with time

	Exp	DOSI	ure				
	x	our	day	Nee	NON T	leg s	reades
Cytogenetic biomarkers (dicentrics/chromosome aberrations)							
Chromosomal rearrangements							
Micronucleated reticulocytes							
Radiation induced DNA lesions							
gammaH2AX							
Circulating DNAs							
Radiation induced mutation profile							
Changes in RNA profiles							
Radiation induced alternative splicing							
Changes in protein profiles							
Radiation induced protein post-translational							
modifications							
miRNA and non-coding RNAs expression profiles							
Epigenetic markers							
RedOx imbalance							
Metabolomics							
Biophysical markers							
Mitochondrial biomarkers (oxidation/phosphorylation)							
Mitochondrial biomarkers (common deletions)							
Biomarkers of internal exposure (radio-isotopes)							

Detectable

Potentially detectable

Not reported