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Nota di contenuto	1. Introduction -- 2. Epigenetics and chromatin biology: unifying themes and differences -- 3. DNA methylation -- 4. Epigenetic modifications in context of chromatin -- 4.1 Histone modifications -- 4.1.1 Histone acetylation and deacetylation -- 4.1.2 HATs, HDACs and cancer -- 4.1.3 Histone methylation -- 4.1.4 HMTs and cancer -- 4.1.5 Histone phosphorylation -- 4.1.6 Histone phosphorylation and cancer -- 4.1.7 Histone ubiquitination -- 4.1.8 Histone ubiquitination and cancer -- 5. Conclusion -- References.
Sommario/riassunto	Epigenetics "above or over genetics" is the term used for processes that result in modifications which are stably inherited through cell generations, without changing the underlying DNA sequence of the cell. These include DNA methylation, Post-translational histone modification and non-coding RNAs. Over the last two decades, interest in the field of epigenetics has grown manifold because of the realization of its involvement in key cellular and pathological processes beyond what was initially anticipated. Epigenetics and chromatin biology have been underscored to play key roles in diseases like cancer. The landscape of different epigenetic signatures can vary considerably from one cancer type to another, and even from one ethnic group to another in the case of same cancer. This chapter discusses the emerging role of epigenetics and chromatin biology in the field of cancer research. It discusses about the different forms of epigenetic mechanisms and their respective role in carcinogenesis in the light of emerging research.

