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| Sommario/riassunto | Progress in information technology has fostered a global explosion of data generation. Accumulated big data are now estimated to be 4.4 zettabytes in the digital universe; and trends predict an exponential increase in the future. Health data are gathered from professional routine care and other expanded sources including the social determinants of health, such as Internet of Things. Biomedical research has recently moved through three stages in digital healthcare: (1) data collection; (2) data sharing; and (3) data analytics. With the explosion of stored health data, dental medicine is edging into its fourth stage of digitization using new technologies including augmented and virtual reality, artificial intelligence, and blockchain. Big data collaborations involve interactions between a diverse range of stakeholders with analytical, technical and political focus. In oral healthcare, data technology has many areas of application: prognostic analysis and predictive modeling, the identification of unknown correlations of diseases, clinical decision support for novel treatment concepts, public health surveys and population-based clinical research, as well as the evaluation of healthcare systems. The objective of this Special Issue is to provide an update on the current knowledge with state-of-the-art theory and practical information on human and social perspectives that determine the uptake of technological innovations in big data science in the field of dental medicine. Moreover, it will focus on the identification of future research needs to manage the continuous |

increase in health data and to accomplish its clinical translation for patient-centered research and personalized dentistry. This Special Issue welcomes all types of studies and reviews considering the perspectives of different stakeholders on technological innovations for big data science in all dental disciplines. Kind regards,