Accelerators for Medical Applications, U. AMALDI, CERN - Cyclotrons and linacs used to produce isotopes for medical applications will be shortly reviewed together with the status of electron linacs used in conventional radiotherapy. Most of the time will be devoted to accelerators and facilities dedicated to oncological hadron therapy, a fast growing field in the medical application of particle accelerators. The ongoing projects will be reviewed, with particular emphasis on the peculiarities of each one of them. This will be an occasion to underline why and how cyclotrons, synchrotrons and linacs all find their niches in this therapeutical application. Some time will also be devoted to describe the challenges put by other, equally important parts of a medical irradiation facility for cancer therapy, in particular rotating gantries and devises for accurate patient alignment.