Even healthy individuals have little insight into their future health trajectory. We don't know which diseases will afflict us in the future, how they will impact our lives, or whether a specific treatment will help. AI models have potential to transform this centuries-old status quo due to their uncanny capacity to predict future outcomes. In this talk, Dr. Barzilay will explain how these models make their predictions and illustrate it with specific examples in the area of cancer diagnosis and treatment. In the second part of her talk, Dr. Barzilay will focus on AI-based methods for drug discovery.