On the spectral theory of Dirac operators with point interactions

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We will discuss a new approach to the spectral properties of Dirac operators with point interactions based on a connection with the Jacobi matrices of certain class. It turns out that some spectral properties of Dirac operators correlate with the corresponding spectral properties of the Jacobi matrices. In particular, self-adjointness of certain realizations of Dirac differential expression on finite or infinite interval will be discussed. The property of these realizations to have discrete spectrum, absolutely continuous or singular spectrum will be discussed too.