CLAIMS

1. An electrocardiogram analysis assistance device using a peak estimation model employing waveform data of partial segments of waveform data in an electrocardiogram as input information and employing peak information indicating whether or not a predetermined type of peak related to analysis of the electrocardiogram is present in the waveform data as output information, the electrocardiogram analysis assistance device comprising:

an analysis waveform acquisition unit that acquires waveform data in an electrocardiogram for analysis;

an analysis waveform select and extract unit that selects and extracts waveform data of a predetermined first period from the waveform data acquired by the analysis waveform acquisition unit as analysis divided waveform data;

an intermediate information acquisition unit that acquires intermediate information generated in a middle layer of the peak estimation model and indicating a shape feature of a peak contained in the analysis divided waveform data by inputting the analysis divided waveform data selected and extracted by the analysis waveform select and extract unit into the peak estimation model; and

a classification unit that classifies a type of the waveform of the electrocardiogram for analysis using the intermediate information acquired by the intermediate information acquisition unit.

2. The electrocardiogram analysis assistance device of claim 1, wherein the type of waveform includes at least two types from out of a standard type, a type having peaked T waves taller than the standard type, a type having wide QRS waves wider than the standard type, or an other-type therefrom.

3. The electrocardiogram analysis assistance device of claim 1 or claim 2, wherein the classification unit performs the classification by clustering the intermediate information.

4. A computer-readable storage medium storing therein a program that causes a computer to execute processing using a peak estimation model employing waveform data of partial segments of waveform data in an electrocardiogram as input information and employing peak information indicating whether or not a predetermined type of peak related to analysis of the electrocardiogram is present in the waveform data as output information, the processing comprising:

acquiring waveform data in an electrocardiogram for analysis;

selecting and extracting waveform data of a predetermined first period from the acquired waveform data as analysis divided waveform data;

acquiring intermediate information generated in a middle layer of the peak estimation model and indicating a shape feature of a peak contained in the analysis divided waveform data by inputting the selected and extracted analysis divided waveform data into the peak estimation model; and

classifying a type of the waveform of the electrocardiogram for analysis using the acquired intermediate information.

5. An electrocardiogram analysis assistance method using a peak estimation model employing waveform data of partial segments of waveform data in an electrocardiogram as input information and employing peak information indicating whether or not a predetermined type of peak related to analysis of the electrocardiogram is present in the waveform data as output information, the electrocardiogram analysis assistance method comprising:

acquiring waveform data in an electrocardiogram for analysis;

selecting and extracting waveform data of a predetermined first period from the acquired waveform data as analysis divided waveform data;

acquiring intermediate information generated in a middle layer of the peak estimation model and indicating a shape feature of a peak contained in the analysis divided waveform data by inputting the selected and extracted analysis divided waveform data into the peak estimation model; and

classifying a type of the waveform of the electrocardiogram for analysis using the acquired intermediate information.

6. An electrocardiogram analysis assistance system comprising:

the electrocardiogram analysis assistance device of any one of claim 1 to claim 3; and

a terminal device that transmits waveform data in an electrocardiogram for analysis to the electrocardiogram analysis assistance device and that receives and presents information obtained by the electrocardiogram analysis assistance device in response to the transmission of the waveform data.