Claims

1. A system for detecting a level of fluid accumulation in a lung of a subject, comprising:

at least one sensor positionable on the subject adjacent to the lung to measure an audio signal generated by the lung;

a memory configured to store data representing the audio signal; and

at least one processor in communication with the memory and being configured to:

retrieve, from said memory, data representing at least one classifier trained to distinguish between two or more levels of fluid accumulation, the two or more levels comprising a level corresponding to a presence of fluid and a level corresponding to an absence of fluid;

process said audio signal by segmenting the audio signal into consecutive time windows, and performing feature extraction to generate at least one feature vector for each time window;

assign a level of fluid accumulation from the two or more levels to the audio signal by:

passing at least one component of each feature vector to the at least one classifier to generate a plurality of tentative fluid levels for the audio signal; and

selecting a most frequent occurring level from amongst the plurality of tentative fluid levels; and

provide an indication to a user that the subject has lung fluid accumulation if the most frequent occurring level is the level corresponding to the presence of fluid.

2. A system for detecting a level of fluid accumulation in a lung of a subject, comprising:

at least one sensor positionable on the subject adjacent the lung to measure an audio signal generated by the lung; and

at least one processor configured to:

segment the audio signal into consecutive time windows;

perform feature extraction to generate at least one feature vector for each time window;

assign to each time window a fluid level which is one of a set of two or more levels of fluid accumulation by passing at least one component of the at least one feature vector for each time window to at least one classifier trained to distinguish between the two or more levels of fluid accumulation to generate a plurality of tentative fluid levels for the audio signal, wherein the two or more levels comprises a level corresponding to a presence of fluid and a level corresponding to an absence of fluid;

select a most frequent occurring level from amongst the plurality of tentative fluid levels and

provide an indication to user that the subject has lung fluid accumulation if the most frequent occurring level is the level corresponding to the presence of fluid.

3. A system according to claim 1 wherein the indication comprises an alarm signal.

4. A system according to claim 3 wherein the indication comprises an alarm signal.