Given:

Group or set of all languages are not countable.

Proof:

From the corollary 4.18 of text book it is clear that the group of legal encodings of a Turing machine is countable with A_{TM} accessed by oracle. Use same argument for proving that the set of all Turing machines is countable.

In other words it can be said that Turing machine with oracle is countable but on the other hands decidability, reducibility and recognizability cannot be proved without oracle support.

But the set of all languages are not countable. Any language D can be mapped to binary vector corresponding of their characteristic vector. This binary vector is infinite in nature and composed of two sequences which are 0's and 1's. The characteristic vector is represented as χ_D.

So group of all languages cannot be placed in correspondence to group of all Turing machines.

Conclusion:

Sometimes some set of all languages cannot be put into a correspondence with the set of all Turing Machines with oracle support. As the set of all languages cannot be kept into set of all Turing machines, hence some languages are not recognizable by using Turing machine oracle access to A_{TM}.