J Hematopathol (2013) 6:1
DOI 10.1007/s12308-013-0176-x

EDITORIAL

# Precision medicine

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Published online: 31 January 2013


The diagnosis of lymphomas has evolved over the years. For a long time, lymphomas were seen as a spectrum, related to the differentiation phase of B- and T-lymphocytes. Since differentiation is a continuous process in which relatively arbitrary steps can be discerned this concept means that also lymphomas are more or less arbitrarily separated in groups that have overlaps. Thanks to this concept, that lymphomas are a group of distinct entities, the thinking on classification has changed: lymphomas comprise a group of diseases that can be recognized by morphological, phenotypic, genetic, and clinical features. This also means that there is no overlap and implies that when enough knowledge is accumulated we will have strict criteria, likely related to the molecular alteration that determines the development of the lymphoma type. The problem is, that the more knowledge we gain, the more variation we see in molecular make-up and the question arises: how much cases that are similar do we need to define a disease entity? In other words, how many different lymphoma types do we accept?

Personalized medicine is the concept that diseases are specific for an individual and one needs to find the treatment and care that is the best for the individual patient. Drugs need to fit to the disease but also to the genetic make-up and personal preferences of the patient. Precision medicine is the biological foundation of personalized medicine. Precision medicine is based on the concept that a very precise diagnosis will guide a very precise treatment. This means that one needs to detect the defect and then aims to repair it. A bit like a car, where a mechanic aims to replace the defunct piece in order the get the car operational again. Of course, the human body is way more complicated than a car, and a human being is more than a body. Nevertheless, the concept is worth working on. So our task as hematopathologists is to detect the precise molecular alteration in a specific lymphoma and advise on the drug that may repair this defect (or kill the cells that have the defect). We are however still far from this situation.

This concept brings us back to classification. The more specific we can define the defects, the more different diseases we can expect. We know already that the variation within even a homogeneous lymphoma type as mantle cell lymphoma is enormous, let alone the diffuse large B-cell lymphoma! Are we moving towards a specific lymphoma in each patient?

Maybe. It is already known for a very long time that individual cases learn us a lot and it is amazing that after many years of experience in pathology I encounter almost every day a case that has features I have not seen before. Some of these interesting cases have messages that are of broader interest. It is therefore that the Journal of Hematopathology is proud of the many interesting case reports we publish. I hope you will enjoy the selection in the present issue!

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