Although anatomical terminology is in use for more than 2000 years, its first official publication achieved in 1895. The need for development of cogent nomenclature arose due to the high level of synonyms labeling individual anatomical structures. Thus towards the end of the 19th century existed more then 50 000 terms describing approximately 5 000 known structures at that time. Such synonymity caused and still causes chaos, especially in the research activities field. The reason for this is fact that most of the research performed not directly by medical field specialists but also information field specialists does not respect the historical evolution of terms. More, it mixes them according to different issues of the official terminologies. Also, further making the research activity complicated is wrong use of anatomical terms, lack of knowledge and misuse of latine grammary and last but not least americanization of the latine terms. Another hot topic is non existence of the official Czech anatomical terminology. This leads to increased tendency of neologisms formation which in turn causes increase of synonymities. Our study demonstrates above mentioned problems on examples from selected human body structures like locomotory and circulatory systems: bursas, 33 selected skeletal muscles, VIIIth cranial nerve, eponymous term Achilles tendon and also an example of direct clinical application – superficial and deep venous system of the lower limb.