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New technology in thyroid surgery: Impact evaluation of a laryngeal animal model study and experience review

Domenico Parmeggiani
Second University of Naples, Italy

This lecture will address a variety of topics related to the use of new technologies in thyroid surgery: experience review topics will be the latest devices for hemostatsis, the last hemostatic products, during traditional thyroidectomy and of course video assisted thyroidectomy (taking some news about robotic transaxillary thyroidectomy). In addition to these subjects, attendees of this lecture will be familiarized with the need for rigorous and stringent testing of candidate therapeutics, so that only the most promising therapies are advanced to clinical trial evaluation of efficacy when treating thyroid pathologies. Complication analysis of thyroid surgery will focus on laryngeal nerve damage, taking an interesting experience on pig laryngeal models for the evaluation of the thermal spread of different surgical devices, using a continuous nerve monitoring.

Biography

Domenico Parmeggiani has studied General Surgery and Endocrine Surgery for 15+ years, during which time he has authored more than 118 peer-reviewed reports. He has served on the editorial boards for the Updates in Surgery and *Journal of Surgery.*

He is a Professor and Researcher of the second University of Naples, where he teaches General Surgery in the Course of Integrated Pathology 2 of the Accademic Degree in Medicine and Surgery of the Second University of Naples, and Surgical Methodology in the Post Degree Specialization in Abdominal Surgery. In the same University he has collaborated to many Research Project and he is President of the Italian Society of Young Surgeons, SPIGC and member of the Scientific Advisory Committees for Italian Society of Day Surgery SICADS. He was President of the XXIV National Conference SPIGC, II International Conference ESYS (European Society of Young Surgeons), Naples 13-16 October 2011 Co-President of the "I Congresso Nazionale di Unità e Valore della Chirurgia Italiana", Roma 22-29 Settembre 2012.

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New heterogeneity of the leukemic stem cells: Consequences on targeted therapy

Dominique Bonnet
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Acute myeloid leukemia (AML) is a clonal disorder defined by the accumulation of abnormally differentiated myeloid blasts. Because leukemic blasts have very limited proliferative capacity, it is believed that leukemic clone is maintained by a rare population of leukemic initiating cells (LIC) that have extensive proliferation and self-renewal capacities. The development of an *in vivo* model that replicates many aspects of human AML had provided a mean to identify leukemic stem cells. LSC is defined by the ability of that cell to initiate AML in NOD/SCID mice. This *in vivo* assay provides the foundation of an assay to define the biological and molecular properties of such LIC.

The LICs have been originally purified as CD34+CD38- cells, regardless of the phenotype of the bulk blast population, and represented the only AML cells capable of self-renewal. Since this early study, further heterogeneities have been identified. Using cell-tracking analysis, the Dick's group identified different sub-clone of SL-ICs. We also show phenotypic heterogeneity of the SL-ICs between patients and also within the same patients. Next generation sequencing data also demonstrate clonal variegation of the LSC. This heterogeneity not only indicates a potential differential origin or progression of the disease but also have important implications in the development of new therapies to eradicate these cells. The seminar will summarize our knowledge of LICs and will try to propose few new avenues that might be taken to eradicate the LSCs pool.

Biography

Dominique Bonnet is a Senior Group Leader at the Cancer Research UK, London Research Institute and has Adjunct Professor appointment, at the University College of London, and University Paris Diderot. She is member the editorial board of different journals. She acts as an executive board member for the International Society of Hematology and Chair the Scientific workgroup on Stem Cells at the European Hematology Association. She also acts as reviewer for large number of papers. Her group is investigating the molecular program that regulates both normal and leukemic stem cells and how oncogenic events impede the normal hematopoietic stem cell development.

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