

Miguel Lo Vuolo, M.D.
Basic Intensive Venous Ultrasound Course
Saturday, April 16th, 2011

AM 8:00	Registration	Connaught Room
Part I	Anatomy & Nomenclature	
8:15	1) Deep Venous System Infra and supra-patellar anatomy, Deep venous duplication, Sciatic Vein	
8:45	2) Superficial Venous System The three venous compartments, Epifascial longitudinal and oblique veins GSV, SSV, SSV of the thigh, Giacomini vein, Superficial venous duplication	
9:30	Refreshment Break and Exhibit	
10:00	3) Perforating Venous System Anatomical variants, Chasing the perforators: all the tips New nomenclature and classification, The "meeting-point" concept Perforating artery, True insufficient versus re-entry perforators Cockett I and perforators of the foot	
Part II	Physiology & Pathophysiology	
10:45	4) Function of the peripheral venous system Origin of venous blood, Centripetal & centrifugal forces Foot pump, Calf muscle pump Bardeleben's first laws, Bassi's antigravitational function Corona phlebectatica paraplantaris, Volume & pressure overload Primary & secondary venous insufficiency Microcirculatory changes & ulceration	
11:30	Questions and Answers	
11:45	Lunch	
Part III	Superficial Venous Insufficiency	
1:00	5) Classification GSV patterns and extra-saphenous patterns, Ultrasound and Häch classification Reflux sources, Terminal and preterminal GSV valves GSV segmental hypoplasia, Development, remodelling, and predominance Inguinal lympho-ganglionic venous network, Did you say ... reflux time? Anterograde reflux, Oblique epifascial veins, SSV patterns	
Part IV	Thrombosis & Obstruction	
2:00	6) Thrombus Location and Extension Contiguous forms, Noncontiguous thrombosis Cockett's (May-Thurner's) syndrome, Pregnancy and puerperium Lung embolism, Paradoxical embolism, Radiation induced venous stenosis, Extrinsic functional positional compression of the popliteal vein Hypertrophic septum intermusculare vastoadductorium Popliteal Entrapment Syndrome, The soleus ring, Venous aneurysms Hypoplasia/aplasia of DVS, Superficial varices due to DVS obstruction SSV of the Thigh and sciatic vein role in DVS obstruction	
3:00	Refreshment Break and Exhibit	
Part V		
3:30	Live Demonstration	
4:30	Questions and Answers	
5:00	Adjournment	

Miguel Lo Vuolo, M.D.
Advanced Intensive Venous Ultrasound Course

Sunday, April 17th, 2011

AM	7:45	Registration	Connaught Room
Part I	8:00	Comprehensive Anatomy GSV terminal Intervalvular segment, Superficial inguinal veins Anterior accessory GSV, Posterior accessory GSV Last tributaries of the GSV and anatomical variations Terminal and preterminal GSV valves, Segmental GSV hypoplasia Saphenous compartment, Alignment sign, Tibial-gastrocnemius angle sign Hunter's canal and adductor's hiatus Symmetric and asymmetric anatomical patterns at the popliteal fossa High SPJ, Anastomotic type of SPJ, SSV duplication, SSV of the thigh Sciatic nerve and veins of the popliteal fossa Different patterns of termination of the SSV of the thigh Variable US appearance of the SSV compartment The intergemellar vein, The sciatic vein The anatomical variant's game, The concept of meeting-point, Boyd Point, May Point Anterior and lateral venous connections below the knee	
Part II	9:15	Functional Evaluation Air Plethysmography, Material and methods, Calibration How to rule out venous outflow obstruction Venous filling curve, Total functional venous volume Capacitance, Deflation devices, First second outflow volume First second outflow fraction, Venous emptying curve, How to rule out reflux 90% of total venous volume, 90% venous filling time Venous filling index, The tip-toe maneuver, Ejection volume and ejection fraction How to rule out calf muscle pump insufficiency Residual volume and residual volume fraction Relation of the latter to post exercise AVP, Initial and final zero point volumes	
	10:00	Refreshment Break and Exhibit	
Part II	10:30	Functional Evaluation Hemodynamic Principles and Repair, Hierarchical emptying Pressure gradients and normal venous flow, Pressure gradients and reflux Bernoulli's principle, Superficial reflux velocity, lateral venous and hydrostatic pressures, Exit and re-entry pressure gradients "True" insufficient and re-entry perforators, The importance of drainage Pressure gradients and sequence of events (dynamics) of a veno-venous refluxing circuit, Hemodynamic suppression testing. Functional DVS reflux? Insufficiency or decompression? The forgotten (foot's) pump Potential role of Cockett I perforator, Functional positional venous compression Diastolic and systolic SPJ retrograde flow, Insufficient SPJ correction... without disconnection? Did you say reflux time? Venous anatomical planes Venovenous shunts (VVS), Types of VVS. Reflux is usually... diastolic?	
	11:15	Questions and Answers	
	11:45	Lunch	
Part III	PM 1:00	Pelvic Venous Insufficiency Anatomical connections and pathological interaction between pelvic and lower limbs venous systems, Cockett (May-Thurner) syndrome, Circulatory pregnancy changes, "I" and "P" points, Pelvic congestion syndrome, Pre-menstrual sciatalgic syndrome,	
Part IV	2:00	Varicose Recurrence Anatomical complexity, Ultrasound patterns, Inguinal lympho-ganglionic venous network, Insufficient drainage, Extrinsic functional positional compression of the popliteal vein, Far from reflux source varices, Unusual routes for reflux, Sciatic-peroneal varices. Inaccessible perforators Deficient surgery	
	3:00	Refreshment Break and Exhibit	
Part V	3:30	Live Demonstration	
	4:30	Questions and Answers	
	5:00	Adjournment	