

1° CONGRESSO
NAZIONALE
ROI

2015

22-23
MAGGIO
ROMA

Alcune considerazioni sulla storica “regola” dell’arteria...

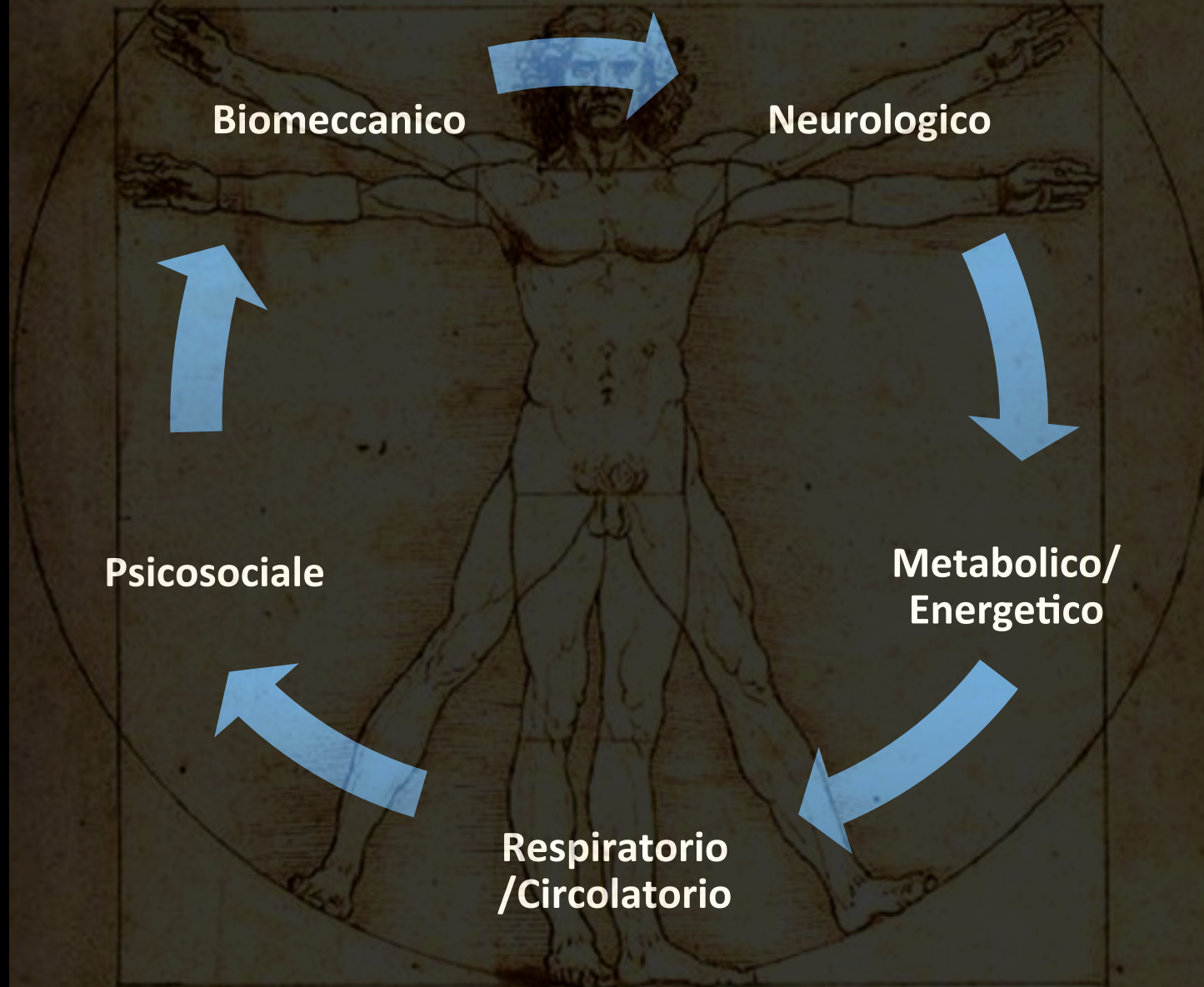
Cristian Ciranna-Raab

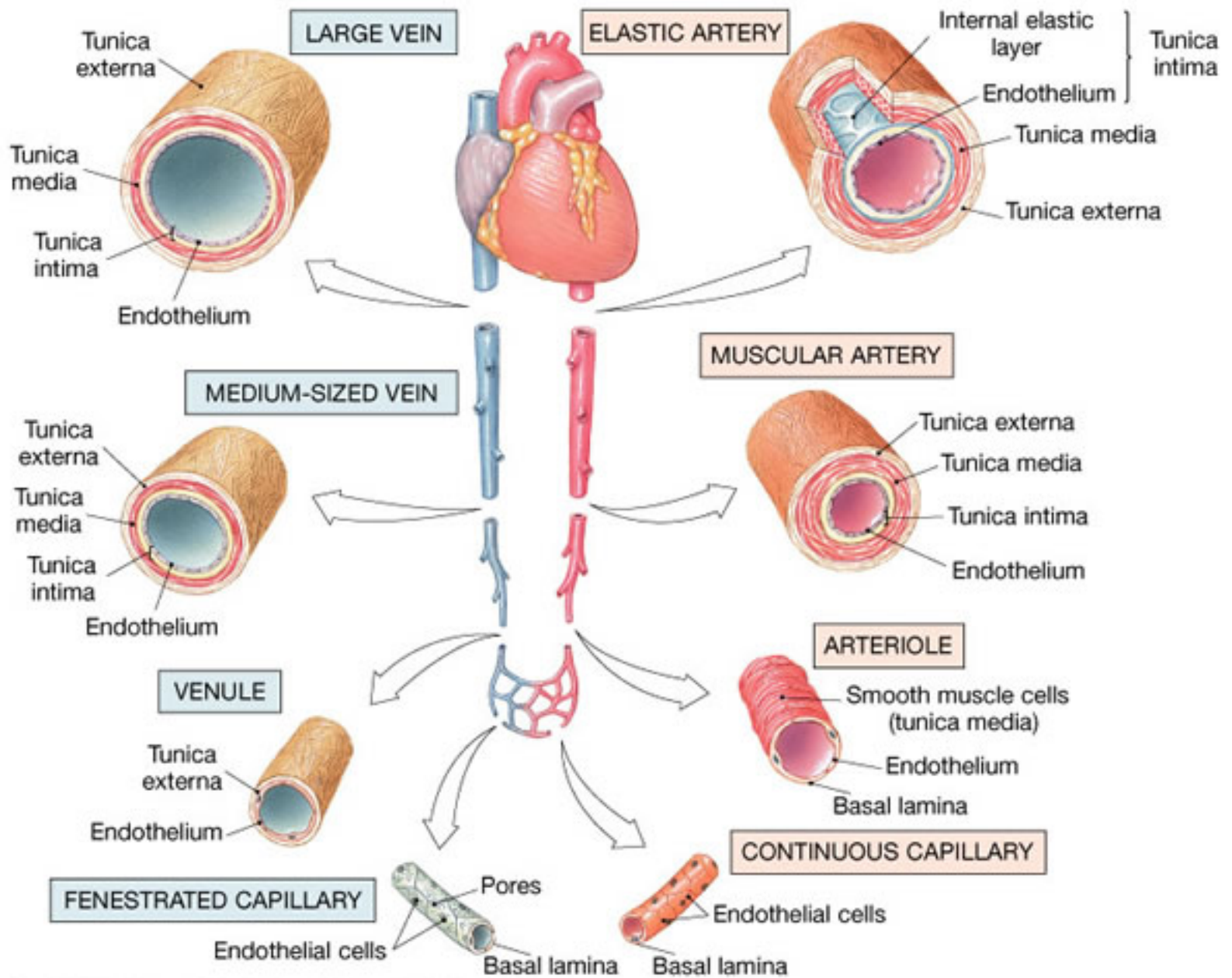
MSc, BSc, DO, DPO,
mROI, mGOSC, DiplGDK/CDS

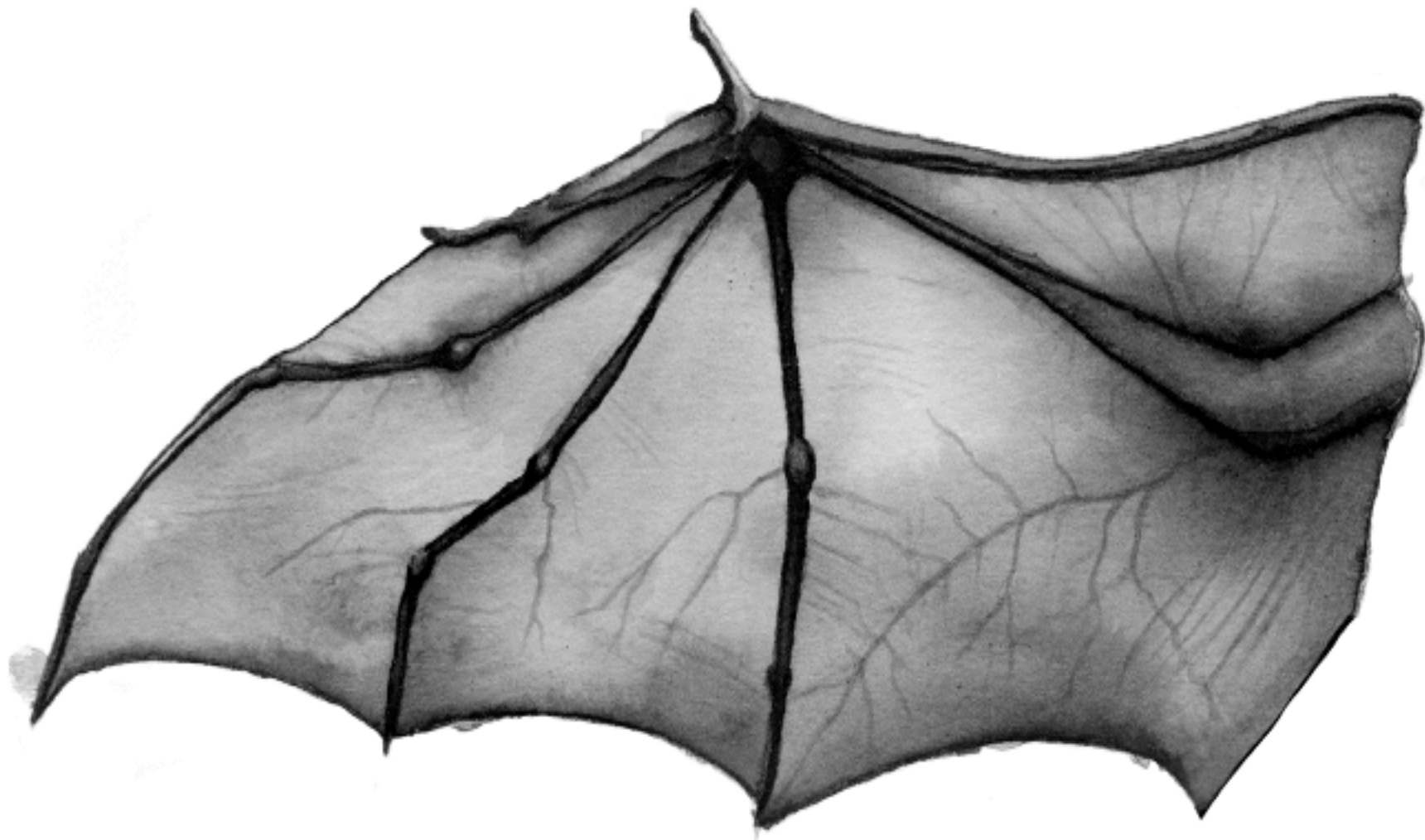
*The rule of the artery must be
absolute, universal, and
unobstructed, or disease will be the
result....*

A.T. Still, Autobiography, Chapter XIV

Modelli Osteopatici Struttura-Funzione







“Vasomotion”

- Nel 1852, T.W. Jones osservò cambiamenti ritmici oscillatori nei vasi periferici nelle ali di pipistrello.
- Oscillazioni pressorie vascolari: Traube-Hering-Mayer (tra 1865 e 1876):
 - Ordine 1
 - Oscillazioni che dipendono dal battito cardiaco
 - Ordine 2
 - Oscillazioni dipendenti dalla respirazione
 - Ordine 3
 - Controllo dal sistema autonomo nervoso

Vasomotion e Flowmotion

Il pacemaker interno

- In letteratura (0-25cicli/min)
 - Vasi con muscolatura liscia (**fast wave**)
 - Vasi terminali – capillari (**slow wave** oscillatory patterns)

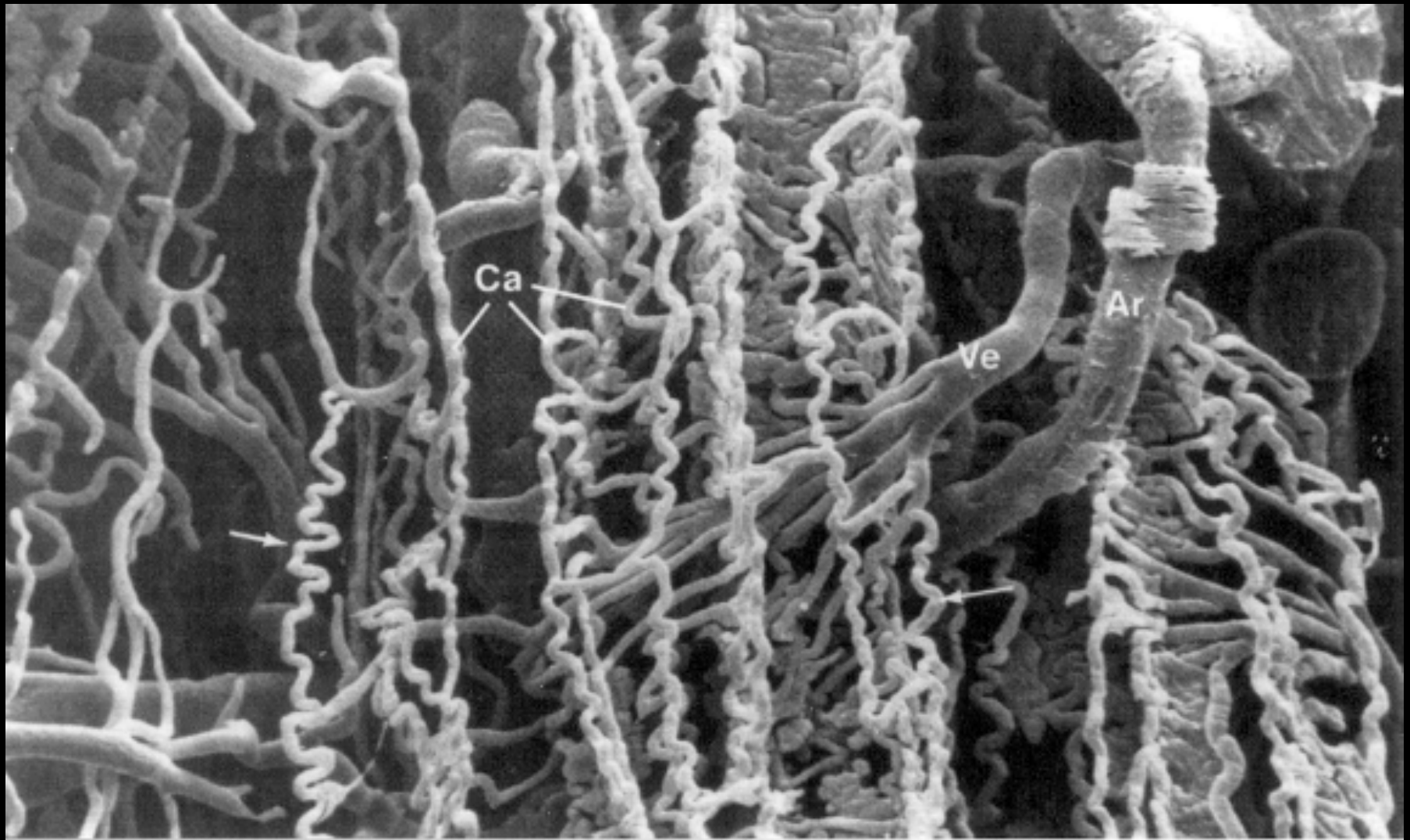
Intaglietta M. Vasomotion and flowmotion: pyhsiological mechanisms and clinical evidence, Vasc. Med 1990 1:101

Nelson K. et al. Cranial rhythmic impulse related to the Traube-Hering-Mayer oscillation comparing laser Dopple flowmetry and palpation, JAOA, 10:3 163-173, 2001

- Centri-vasomotori
 - Importanti nella letteratura storica osteopatica e spesso menzionati anche in relazione a stimolazioni manipolative

*I have dissected and witnessed the very best anatomists that the world affords dissect. I have followed the knife after arteries through the whole distribution of blood of arterial systems, to the great and small vessels, until the lenses of the most **powerful microscopes** seemed to exhaust their ability to perceive the termination of the artery...*

A.T. Still, Philosophy of Osteopathy, Chapter IX




Microvascular architecture in skeletal muscle.






Capillaries (Ca) are oriented longitudinally in the same direction as the muscle fibers they supply. The capillary network is supplied by an arteriole (Ar) and drained by a venule (Ve).

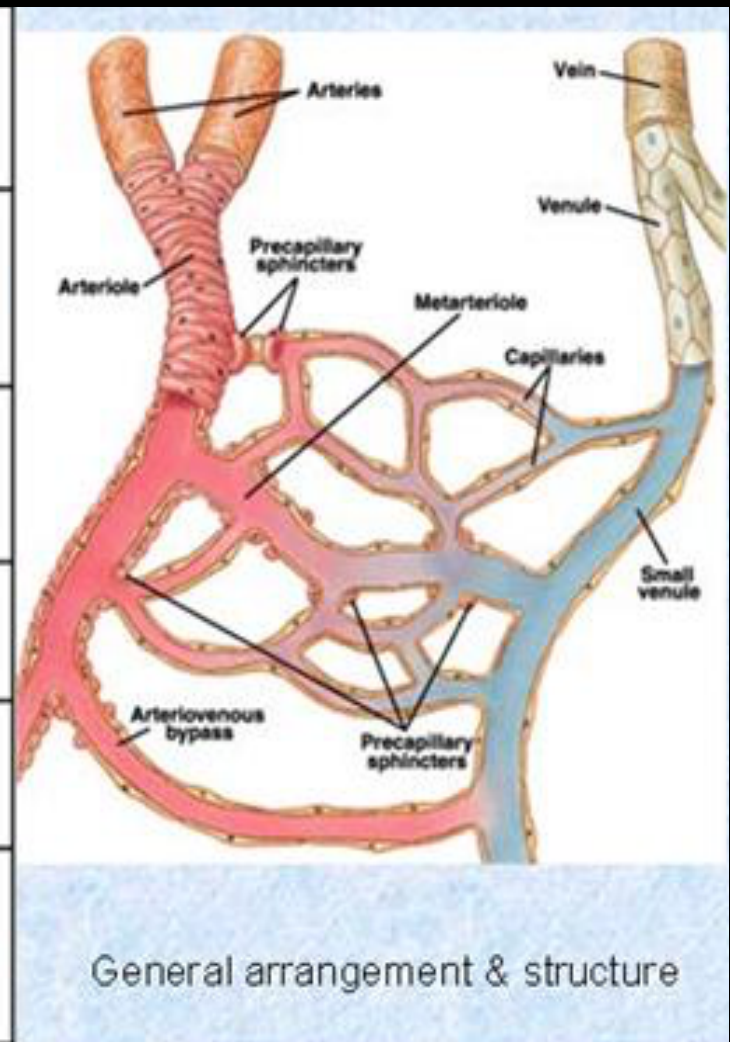
Reproduced from Kessel and Karden

Microcircolazione

- La parte terminale, piú piccola del sistema vascolare:
 - Consiste:
 - Arteriole
 - Metarteriole
 - Sfinteri precapillari
 - Capillari
 - Venule
- 

Dimensioni anatomiche

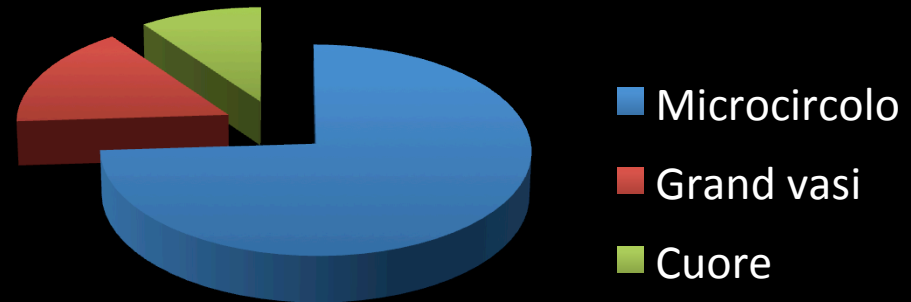
	Mean diameter	Mean wall thickness	Endothelium	Elastic tissue	Smooth muscle	Fibrous tissue	
Artery	4.0 mm	1.0 mm	Low	High	High	Low	
Arteriole	30.0 μm	6.0 μm	Low	Low	High	Low	
Capillary	8.0 μm	0.5 μm	High	Low	Low	Low	
Venule	20.0 μm	1.0 μm	Low	Low	Low	High	
Vein	5.0 mm	0.5 mm	Low	Low	Low	High	

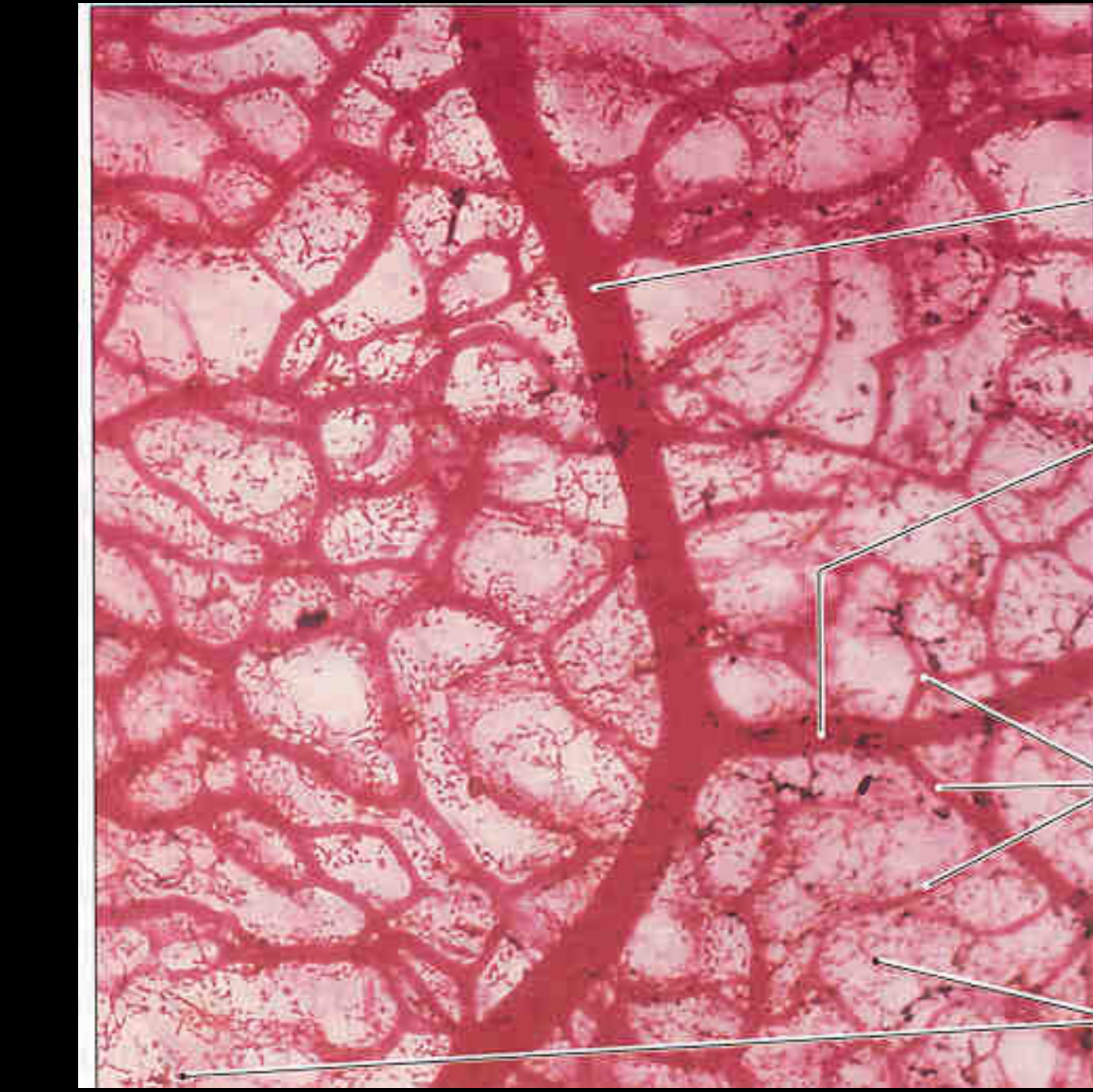


Microcircolazione

- 74% dell'intera circolazione
- 100.000km
- 90 Trillioni di cellule
- 7 campi da calcio

Percentuali di distribuzione



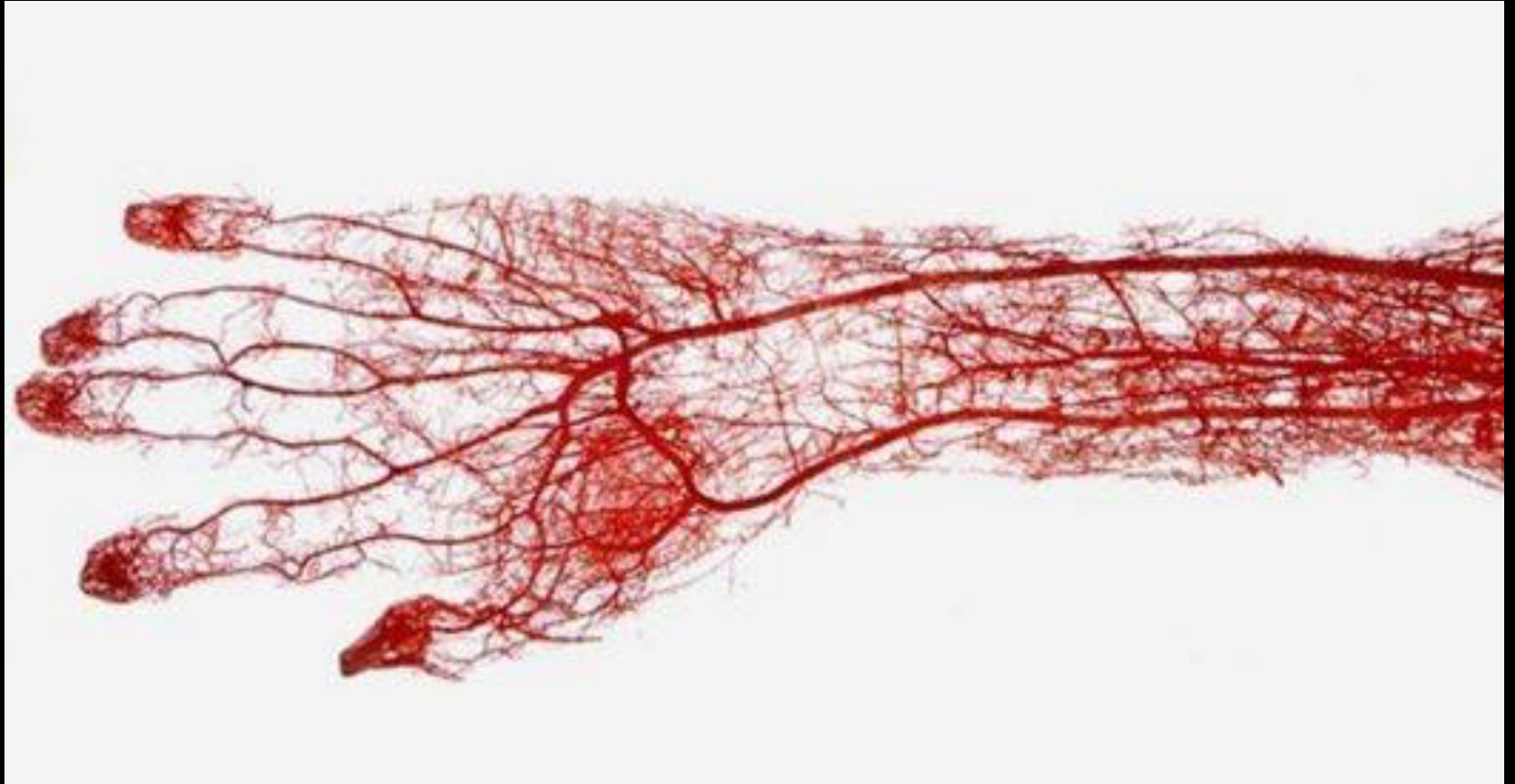
A histological micrograph showing a large, dark-stained blood vessel on the left that branches into a dense network of smaller vessels on the right. The vessels are stained a deep red color. The branching pattern shows a large vessel (small artery) dividing into a smaller vessel (arteriole), which then further divides into many tiny vessels (metarterioles) that form a capillary bed. Labels with leader lines point to these different levels of the vascular hierarchy.

Small
artery

Arteriole

Metarterioles

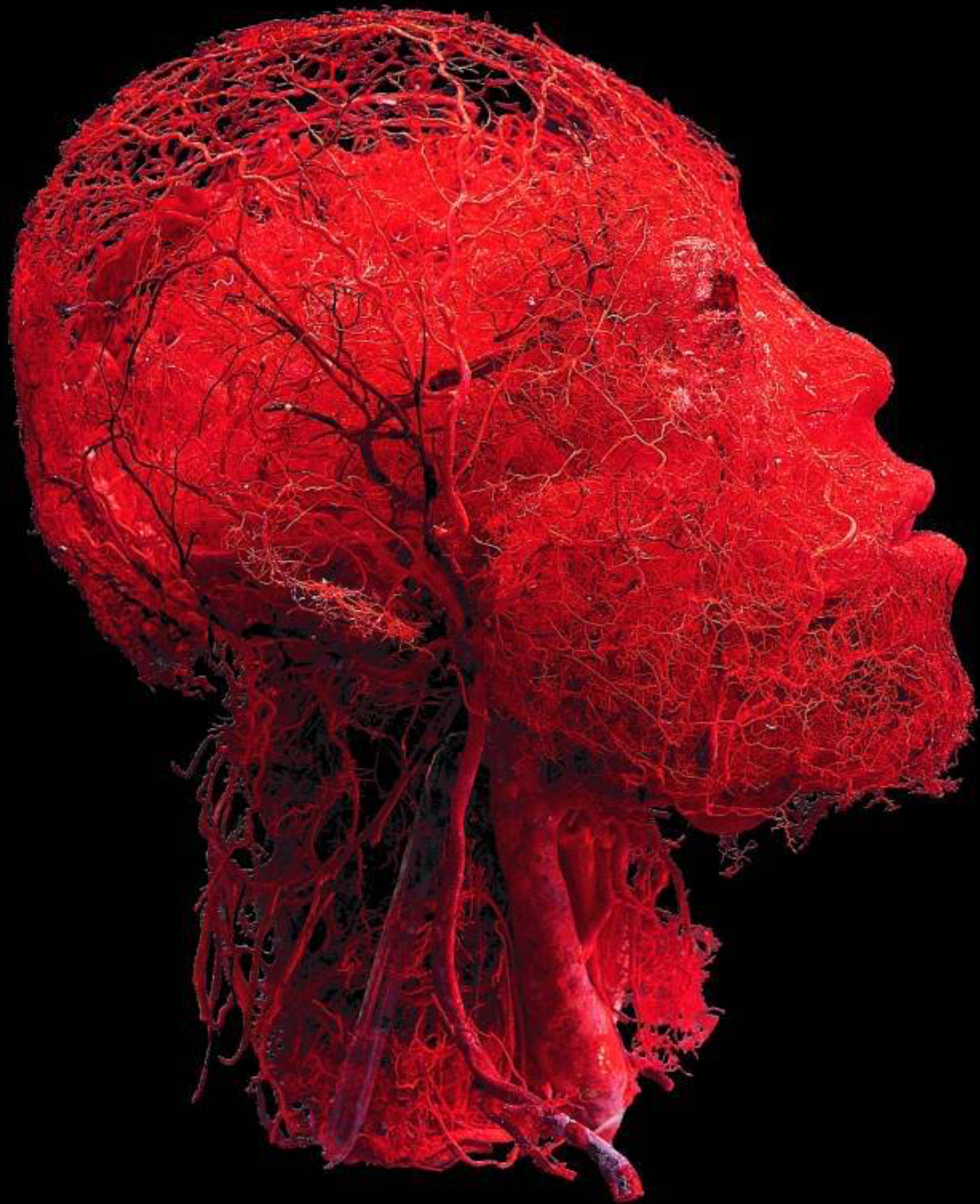
Capillary
beds

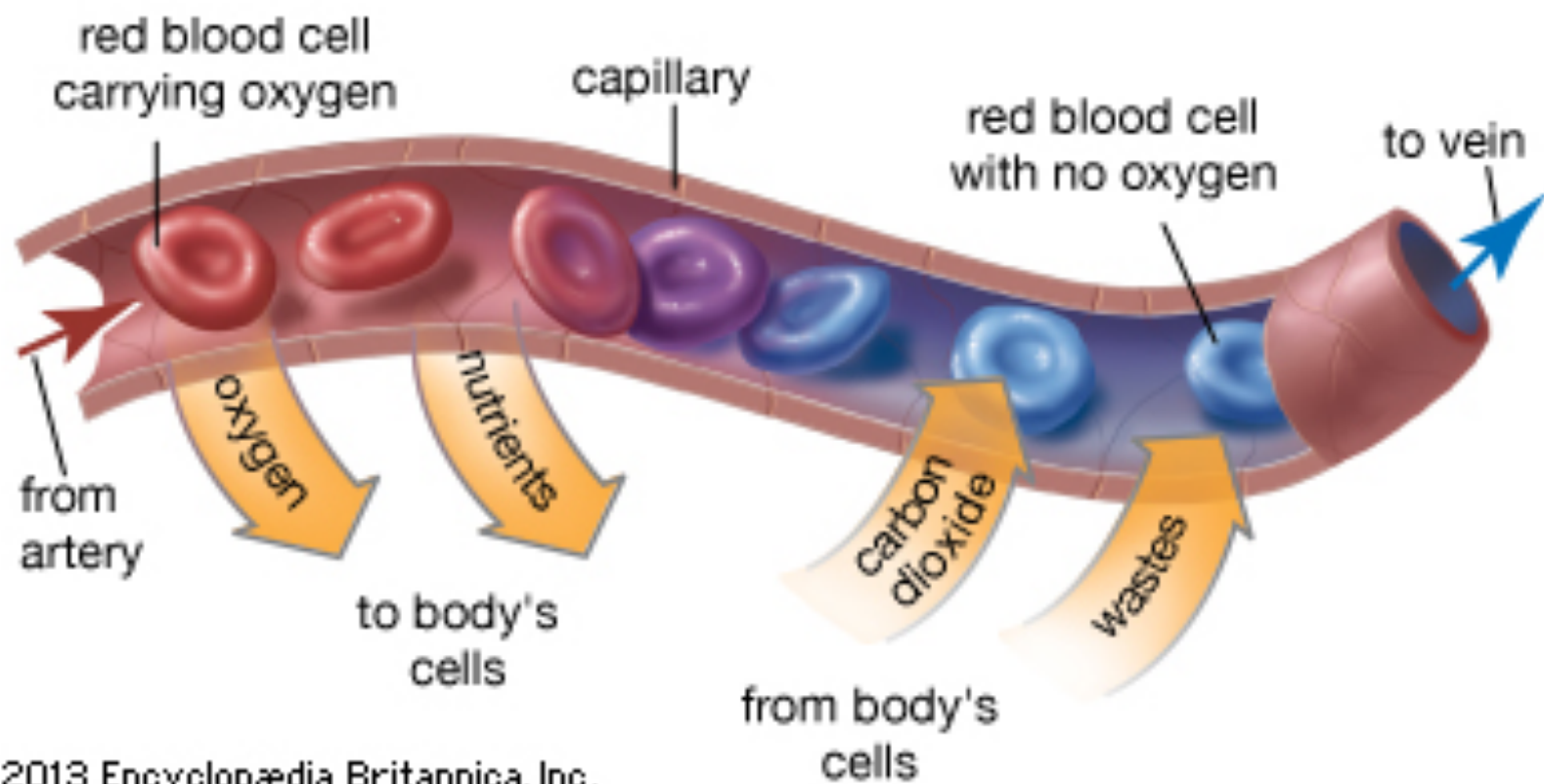


Cosa possiamo osservare?







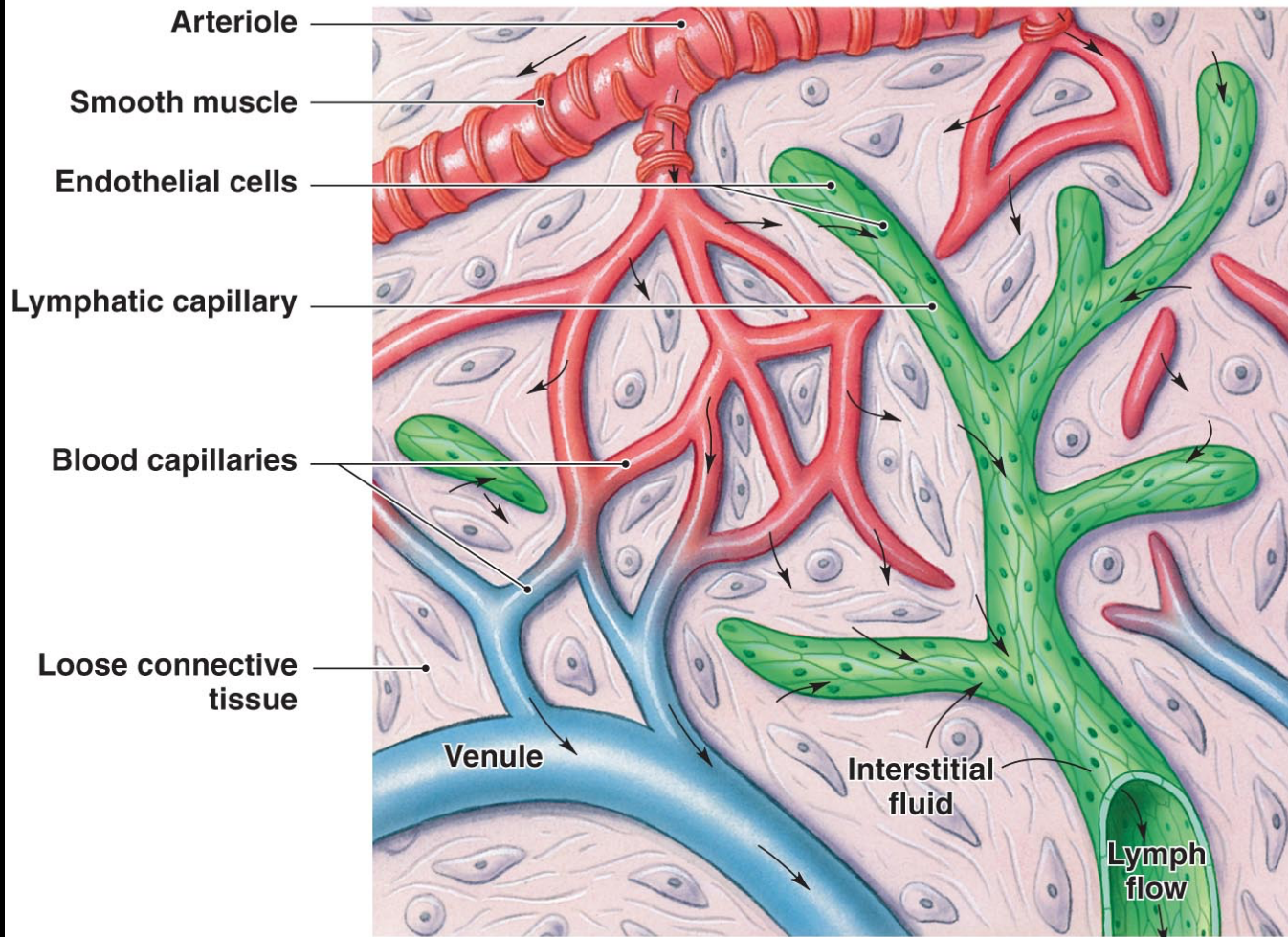


Vasomotion e il caos



Unità Funzionale

The flow of interstitial fluid into lymphatic capillaries, where it is called lymph



Transmigrazione – attività immunologica



Ricerca

- Studio pilota (estate 2014)
- Domanda:
 - Le tecniche manuali osteopatiche hanno un effetto sulle caratteristiche funzionali del sistema microcircolatorio?
 - Metodi:
 - O2Coxygen to see – (LEA Medizintechnik)
 - Flusso circolatorio nel microcircolo
 - Saturazione Ossigeno nei capillari
 - Riempimento dei microvasi
 - Velocità del flusso

Esplorazione



Metodi

- 12 soggetti sani (20anni)
- Misurazioni a riposo per 2min
- Tecniche applicate:
 - Diaphragm release, Suboccipital release, HVT C7/D1, BLT of the forearm, HVT radial head, visualisation of the anatomy, fascial techniques
 - Osservazione delle reazioni e caratteristiche vascolari per 2min dopo la tecnica

In profondità nel tessuto muscolare...



Conclusioni

- I risultati ufficiali verranno pubblicati entro la fine del 2015
- Possiamo dire che tutte le tecniche hanno un'effetto sul sistema (breve termine)
 - Esempi:
 - HVT Cervicale C7/D1
 - Rilascio fasciale locale (arto superiore)

Le mie conclusioni...

- Il modello vascolare, assieme a quello fasciale, rappresentano:
 - Un sistema di (auto)regolazione
 - Processi omeostatici
 - Processi di riparazione (infiammazione)
 - Promotori della salute attraverso l'azione immunitaria.

*A.Pischinger, Extracellular Matrix and Ground Regulation:
Basis for a Holistic Biological Medicine, 18th Ed., NA Books, 2007*

Cercare la salute...

It has been up in view for over thirty-five years and has established beyond all controversy that blood is the food of life. When the system can use it normally health is your answer...

A.T. Still, Research and Practice, 1910

Ringraziamenti

Institut für Mikrozirkulation, Universitätsklinik Charité,
Berlin, Germany

- *Prof. Dr. R.C. Klopp*

- *Dr. W. Niemer*

Osteopathie Schule Deutschland

Osteopathic Research Institute

- *Michael Vittoria DO*

