



Correlation of day-period, clinical evaluation and duplex in varicose veins. A cross-sectional study in an upper-middle income country of South America

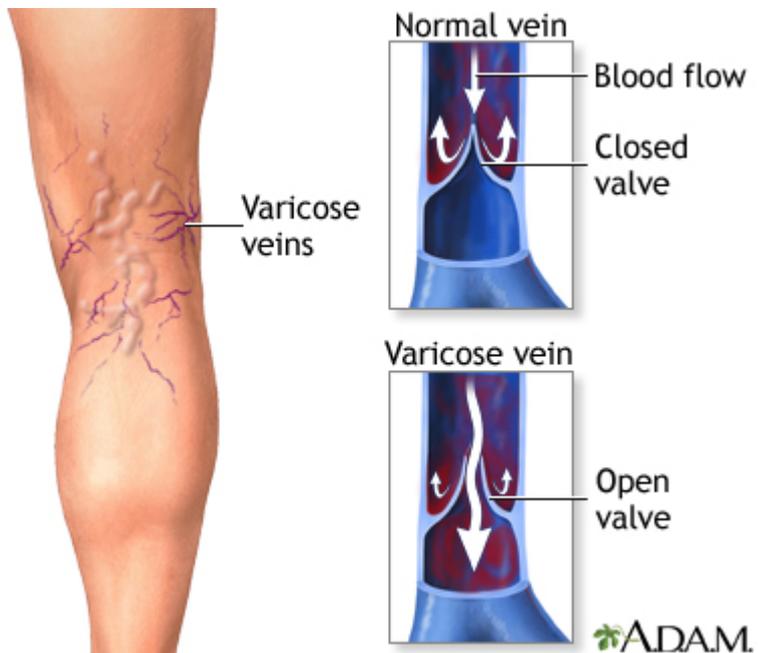
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Cavalieri E, Barros E, Freitas T, Trevizo J, César C, Amaral F, Cassola N, Prestes O, Clezar C, Guedes L, Flumignan C, Vasconcelos V, Nakano L, Guedes H, Amorim J, Baptista-Silva J, Flumignan R

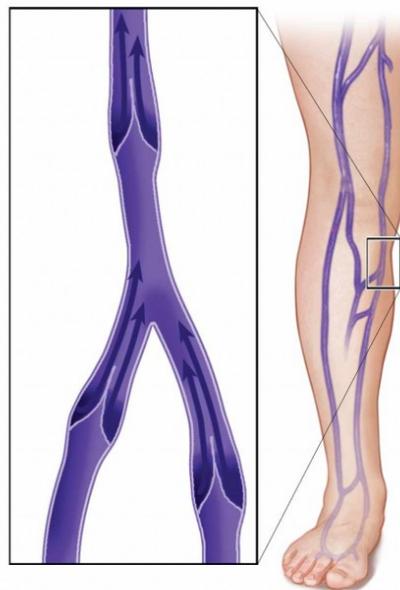
Clonflict of interest:

- ✓ Project funded by the brazilian National Council for Scientific and Technological Development  **CNPq**
- ✓ I have no actual or potential conflict of interest in relation to this presentation

Introduction:



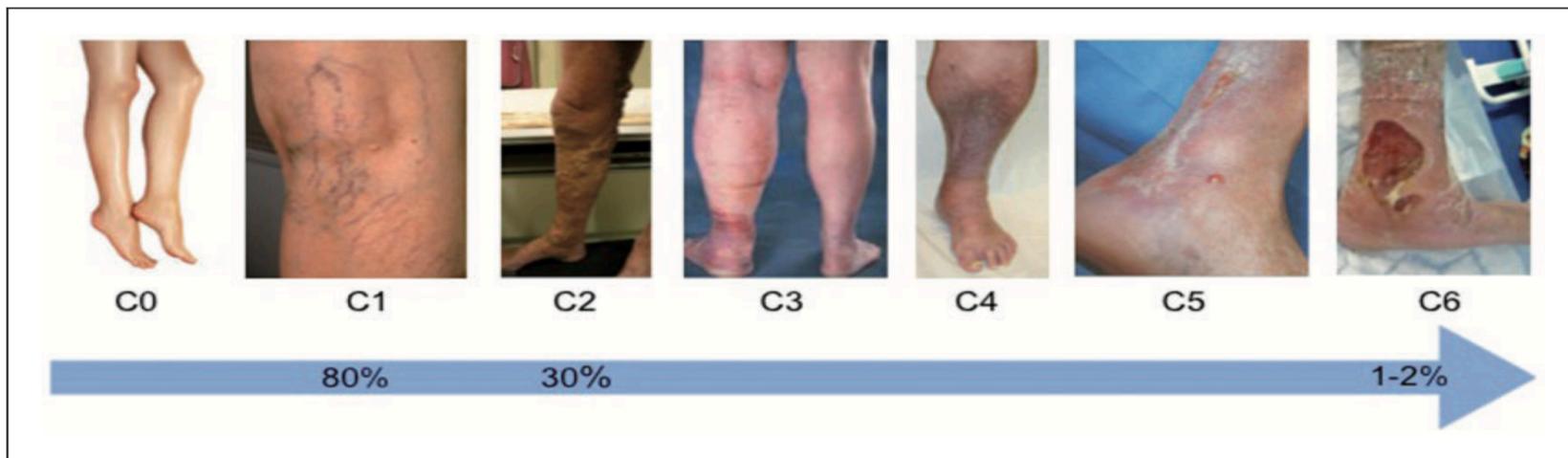
Normal veins



Varicose veins



CEAP classification for varicose veins



Onida S et al. Phlebology. 2016 Mar;31(1 Suppl):74-9

ESVS Wittens et al. Eur J Vasc Endovasc Surg. 2016 Jun;49(6):678-737

Prevalence:

CVD (C0 higher)

78% in Western Europe

87% in Eastern Europe

88% in Latin America

85% in the Middle East

87% in the Far East

- ✓ **Telangiectasiae (C1)** 80%
- ✓ **Varicose veins (C2)** 20% to 64%.
- ✓ **C3 to C6** 5%
- ✓ **C6** 1-2%

Varicose Veins



Symptom worsening due to supine position and afternoon shift is known, however there is no correlation of similar factors;



<https://rsaude.com.br/cianorte/materia-destaque/importancia-do-eco-doppler-ou-ecografia-vascular/16340>

Objective

- ✓ To assess whether there is correlation of vascular ultrasound (VU) data with epidemiological data, including period and time of examination.

Methods and Material:

- ✓ Cross-sectional study;
- ✓ Patients with surgical indication for treatment of lower limb varicose veins who underwent through vascular ultrasound;
- ✓ Data collected: time of day, time of examination, patient's gender, pathophysiology (CEAP) and risk factors;

Method and Materials:

- ✓ Analysis of 358 examinations of 560 venous ultrasound performed in 2017;
- ✓ B-mode ultrasound and spectral analysis with longitudinal section vessel
- ✓ Patient in an upright position

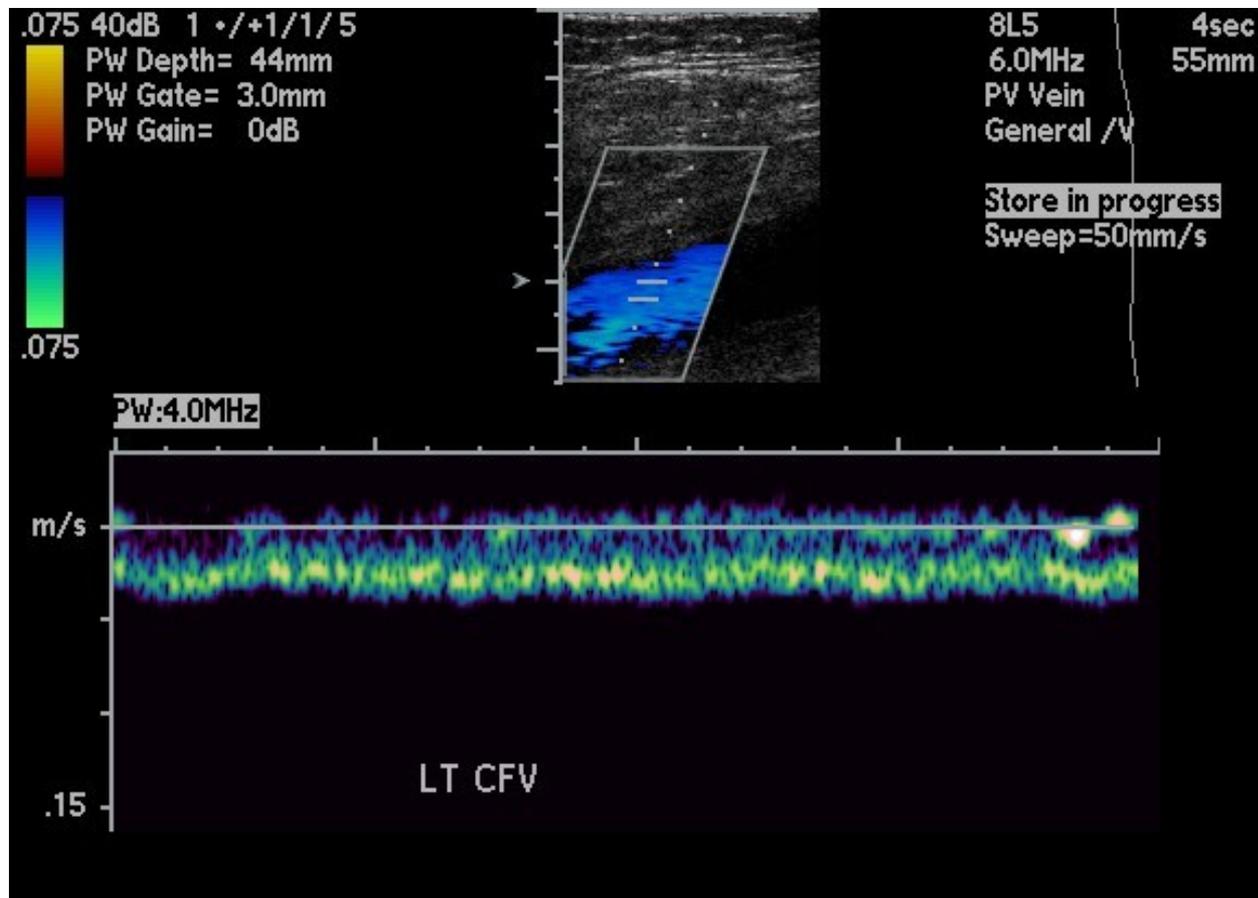
Altered venous vascular ultrasound criteria

A - Reflux greater than 1 s in the common femoral vein or popliteal vein;

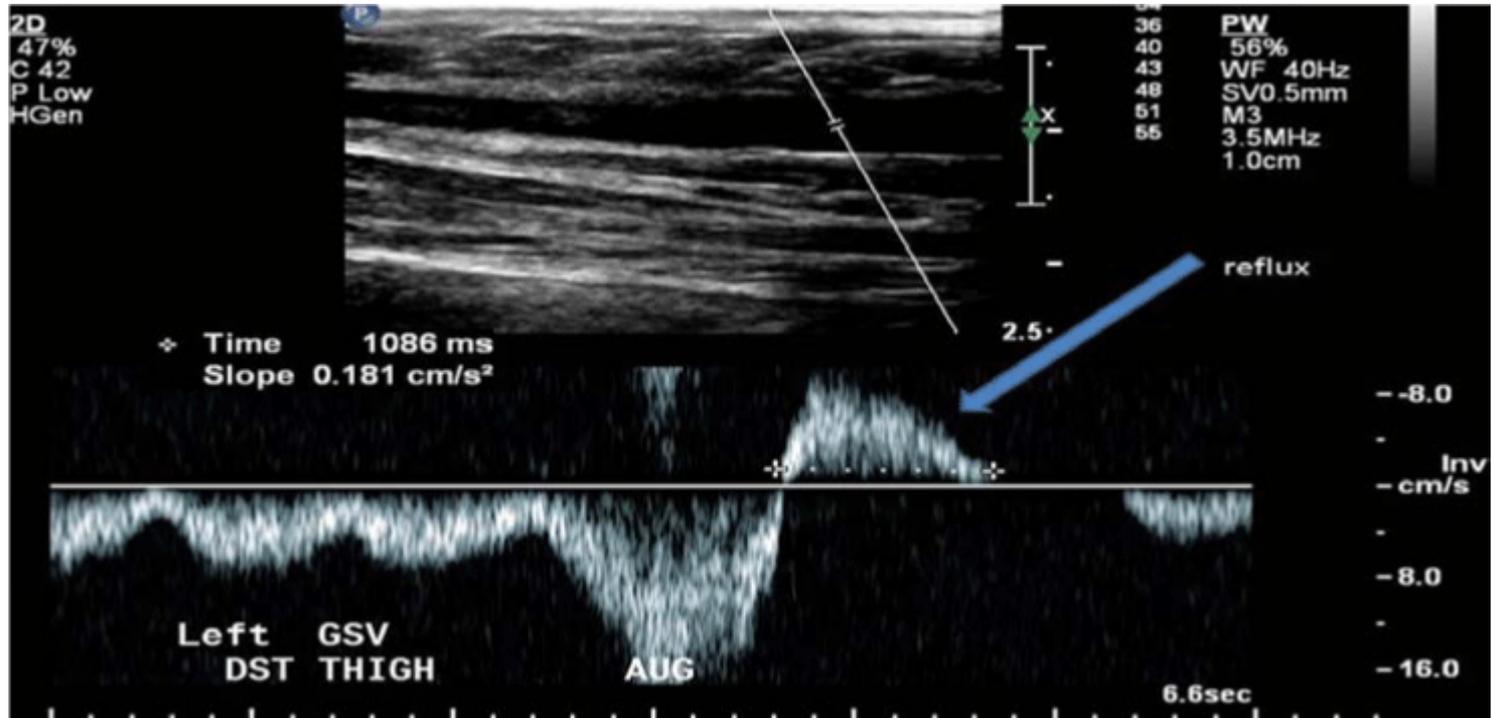
B - Reflux greater than 0.5 s in the superficial venous system, deep femoral vein and calf veins;

C - Reflux in perforator veins greater than 0.35 s;

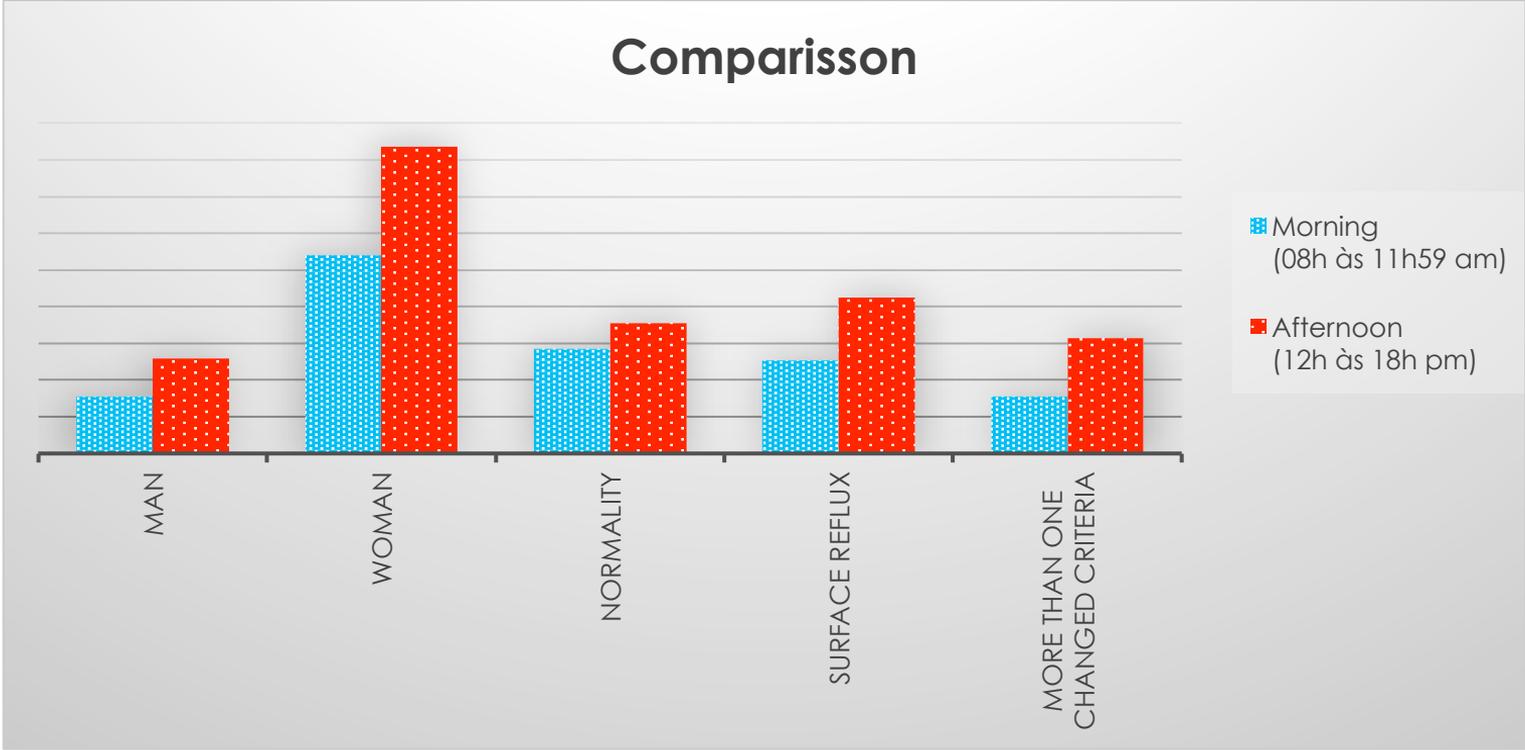
Normal flow femoral vein



Pathologic reflux in great saphenous vein

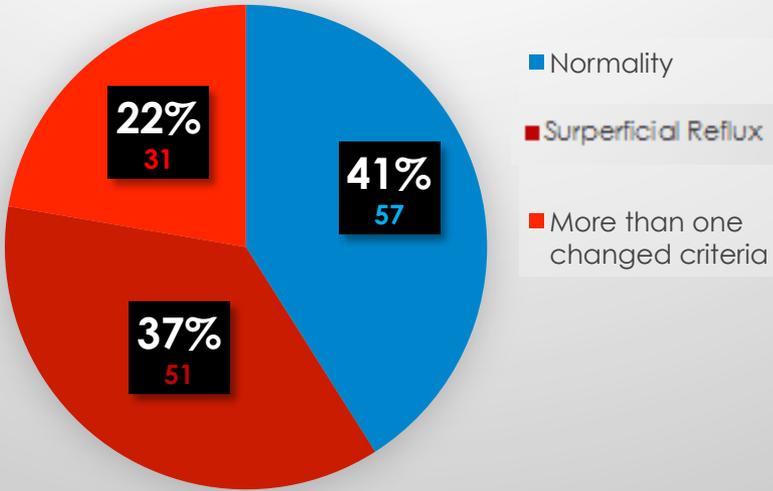


Results:

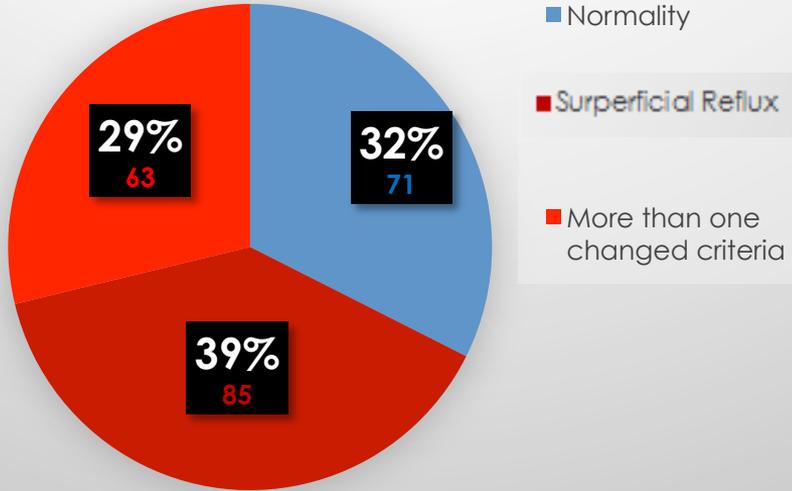


Results:

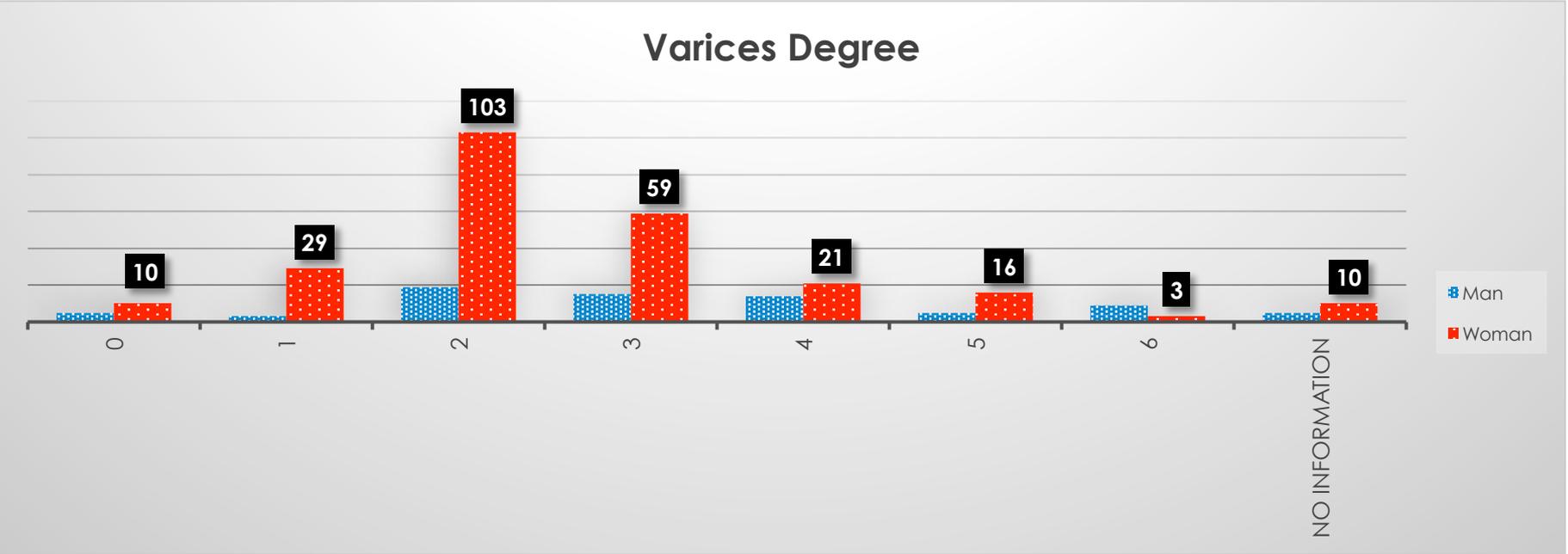
Morning
(08h à 11h59 am)



Afternoon
(12h à 18h pm)



Results:



Results:

- ✓ The exams were more performed in the afternoon 219 versus 139;
- ✓ The most frequent criteria was the presence of superficial reflux;
- ✓ Most patients are women (76.8%);
- ✓ The average age was 52 years old (9 years to 80 years);

Conclusions:

- ✓ In the afternoon there were more ultrasound alterations, about 68% versus 49%, compared to the morning;
- ✓ Women are a higher population and have more CEAP C2 and C3;
- ✓ Men are more asymptomatic and complain more about edema, while women complain more about pain.

Thank you!
Gracias!
Obrigado!

