

# LATINOS AND VTE

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## ABSTRACT

Latin Americans (Latinos) make up about 18% (60 million) of the 328 million population of the US. Most of the Latino population is concentrated in the South, Southwest, and Western parts of the U.S. Latinos have a significantly lower prevalence of VTE compared to Caucasians, but higher than Asians/Pacific Islanders. The reasons for the high occurrence of thrombosis in this population is a complex interplay between genetic and environmental risk factors. Obesity and diabetes cause a higher risk of VTE to the Latino race. We conclude that there is a strong correlation between genetic factors and the incidence of thrombosis in Latin Americans, although they still have one of the lowest VTE rates throughout all the races.

## INTRODUCTION

VTE is when a blood clot is formed in the blood vessels. There are 2 types of VTE: Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE). VTE is common amongst all people, irrespective of age, race, gender and nationality. Older people and people with co-existing conditions are more prone to VTE. The U.S. has a population of approximately 328 million, and Latinos constitute approximately 60 million (18%). The purpose of our research was to analyze the correlation between Latinos and VTE and the possible risk factors for VTE within the Latino population.

## BACKGROUND

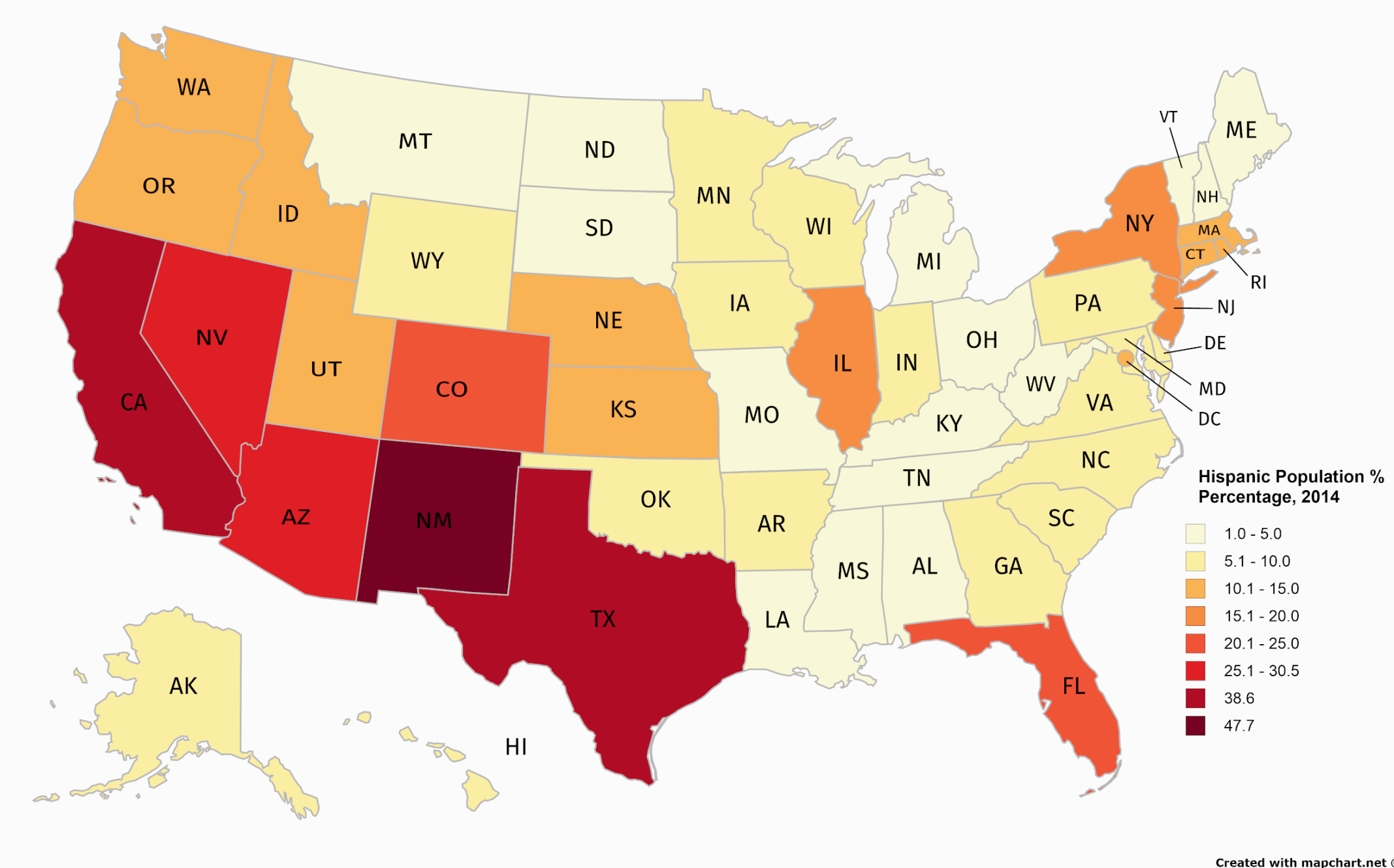
- Latinos can be traced to Spanish, European, Asian, and African roots.
- Their culture comes from South America, the Caribbean, and Central America. The main languages spoken are Spanish or Portuguese.
- Latin Americans come from diverse social, economic, and geographic backgrounds.
- Latinos have a habit of smoking and drinking from a young age, which causes them to be at a higher risk for thrombosis.
- Starting off these habits at a younger age, especially when the body isn't fully developed yet, are physical risk factors that can cause VTE.

## INCIDENCE OF VTE IN LATINOS

- About 55 out of 100,000 Latinos (0.93%) suffer from a thrombotic episode. Latinos are the least affected by VTE compared to other races.
- Very few Latinos suffer from VTE because of how genetics and conditions affect them.

## DISTRIBUTION OF LATINOS IN THE US

- Most of the Latino population is concentrated in the South, Southwest, and Western parts of the U.S.



## CHARACTERISTICS OF THE LATINOS

- Most Latinos have brown eyes, the height is an average of 5'7 for men and 5'3 for women.
- Conditions such as obesity and diabetes are higher in the Latino population than the African American population.
- The people are affected with VTE to a much lesser degree compared to other races and ethnicities.

## GENDER DIFFERENCES

- In the Latino population, males are affected more by thrombotic conditions than women, because more males have the conditions that are risk factors for VTE, such as drinking and smoking.
- Males are more commonly diagnosed with obesity and diabetes compared to female hispanics, these 2 conditions can strongly impact VTE risks and future health outcomes.
- Almost 64% of the cases reported for VTE are males and the remaining 36% are women.

## AGE DIFFERENCES

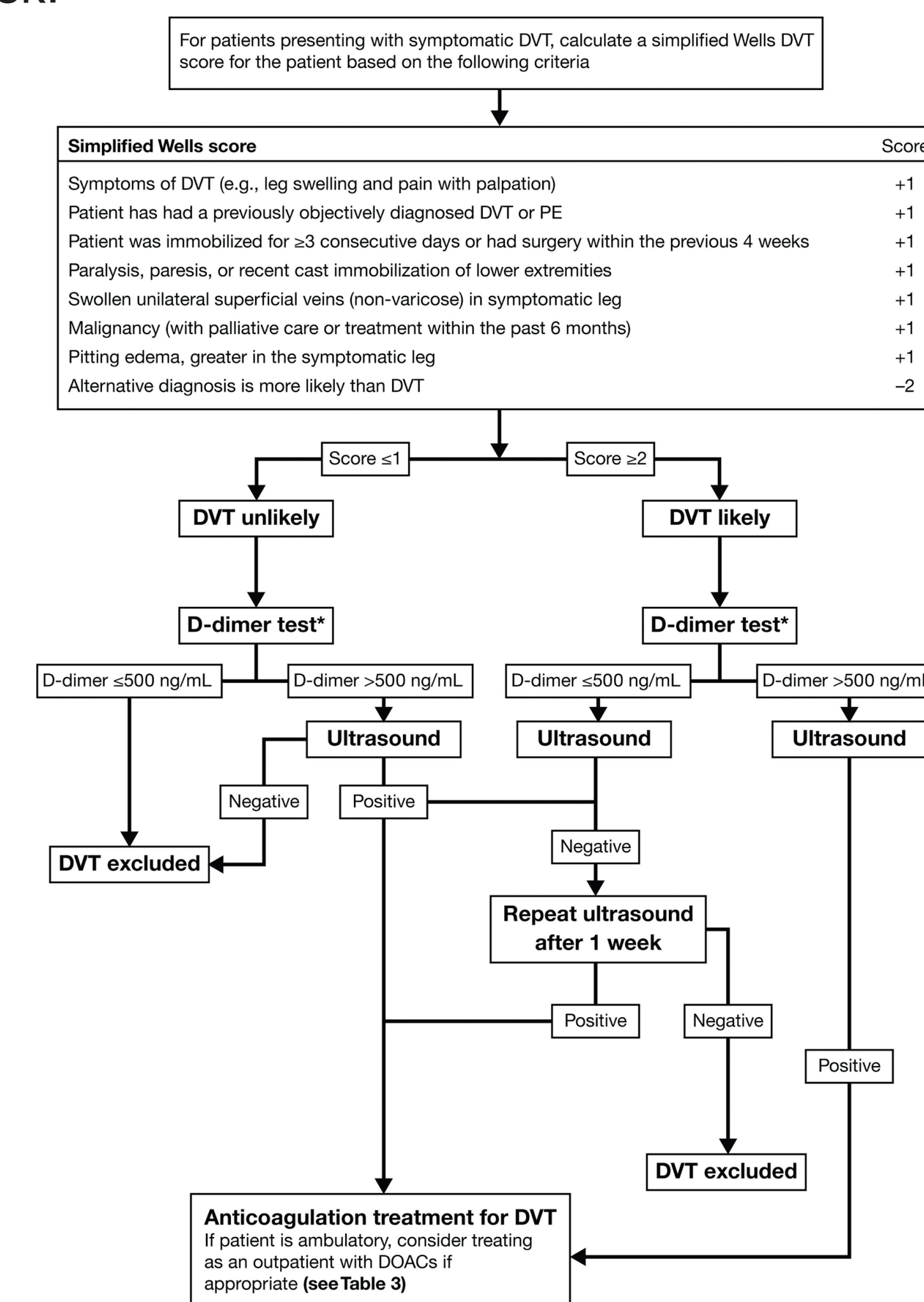
- VTE can occur throughout a person's lifetime, although it is most prevalent in the older populations.
- Aging causes an increased number of coagulating peptides. With higher numbers of peptides, the incidence of clots increases.
- The incidence rate of VTE in Latinos before age 0.4%, which rises to 0.5-0.6% around age 80.
- Latinos have a lower incidence rate of VTE than Americans in the U.S.

## CHALLENGES FOR LATINOS

- The cost and the ability to access to knowledge and medication is difficult.
- Several medical facilities are incapable of providing care for VTE or lack employees or knowledge.
- Several patients have a difficult time understanding healthcare information making the process of taking medication regularly difficult.
- Some Latinos do not have sufficient funding for even a partial treatment, making the treatment overall ineffective at preventing VTE.

## PREDICTORS OF VTE IN THE LATINOS

- The Caprini Score is used for surgical patients and assess 40 risk factors based on a 1-5 scale. Each risk factor is considered on a 1-5 scale, with 5 being high risk and 1 being low risk.
- A Wells DVT/PE score (also known as Wells score) is used to determine whether the patient is at high-risk for DVT. The score takes into account many factors, such as edema, calf swelling, and paralysis, to predict the probability of contracting DVT. A Wells Score of -2 to 0 shows a low probability, 1 to 2 points: Moderate probability, 3 to 8 points indicates a high probability for DVT.
- A Wells PE score (also known as revised Geneva Score): A score of 0-1 indicates a low risk, 2-6: moderate risk and >6: high risk.



## FUTURE DIRECTIONS

- In the future, we plan to research thrombotic conditions in other races.

## TREATMENT OPTIONS

- Initiation of anticoagulant agents such as heparin, LMWH, and fondaparinux, followed by oral warfarin. In case of warfarin, the International Normalized Ratio (INR) is usually adjusted between 2.0-3.0.
- Direct Oral AntiCoagulants (DOAC's). The DOAC's have an advantage of having an ease of administration, lack of dietary restrictions that are common with warfarin, and not requiring frequent blood monitoring.
- rTPA (recombinant tissue plasminogen activator) breaks the clot, restores the blood flow in the vessel and converts plasminogen into plasmin, this process breaks the clot.
- Inferior Vena Cava (IVC) filter to prevent current and future clots from traveling to the heart.

## CHALLENGES IN THE USE OF DOAC'S

- Lack of access to other public services, including electricity and sanitation which impairs adequate provision of healthcare
- Economic barrier due to high costs
- Lack of knowledge regarding the pathology of VTE, leading to late consultation.
- In rural areas, access to an anticoagulation clinic may be difficult.
- Non-specialists are also less likely to be aware of the range of available treatments

## SUMMARY AND CONCLUSIONS

- Latinos are less prone to VTE than other ethnicities and have a lower incidence rate than other ethnicities. Poor lifestyle amongst the Latinos is one of the major factors that leads to VTE. Male Latinos are at higher risk than female Latinos due to poor life choices such as smoking. Genetic factors have a strong correlation with the incidence rate of VTE in Latinos. Race/ethnicity should be considered an important factor in the risk-stratification of patients with suspected VTE or patients at some risk for developing VTE.

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