INTRODUCTION

The recommendations were formed by a guideline panel composed by experts from Latin America. These guidelines are adaptations of the original ASH guidelines on VTE and addressed questions from 4 chapters of the original effort: Prevention of VTE in Surgical Patients, Prevention of VTE in Medical Patients, Treatment of Acute VTE, and Optimal Management of Anticoagulation Therapy.

The public comment period occurs after recommendations are formed but before a manuscript report of the guidelines has been finalized and before ASH organizational approval of the guidelines. Comments collected during the open comment period are provided to the guideline panel for review prior to finalizing the guidelines.

These draft recommendations are not final and therefore are not intended for use or citation.

To submit comments on the draft recommendations, please visit https://vtelatinamerica.questionpro.com. Only comments submitted via the online survey will be reviewed by the guideline panel.

This file includes links to the full evidence tables online. To view the Evidence to Decision tables, click the header for each section or on the question number for each recommendation.

The public comment period ends on April 12, 2019.

The VTE Guidelines in Latin American panel includes experts from the following institutions and societies: Sociedad Venezolana de Hematología; Sociedad Boliviana de Hematología y Hemoterapia; Sociedad Argentina de Hematología, Sociedad de Hematología del Uruguay; Grupo Cooperativo Latinoamericano de Hemostasia y Trombosis; Grupo Cooperativo Argentino de Hemostasia y Trombosis; Associação Brasileira de Hematologia, Hemoterapia e Terapia Celular; Sociedad Mexicana de Trombosis y Hemostasia; Sociedad Chilena de Hematología; Sociedad Peruana de Hematología, Pontificia Universidad Católica, Chile; Asociación Colombiana de Hematología y Oncología (ACHO); Sociedad Panameña de Hematología.

RECOMMENDATIONS

Prevention of VTE in Surgical Patients

- **Question 1:** Should pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing transurethral resection of the prostate?

  The ASH Latin American Guideline Panel suggests against thromboprophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

  **REMARKS:**
  Patients at high risk of venous thromboembolism (e.g. prostate cancer) may benefit from thromboprophylaxis. For such patients, recommendations 1 to 4 address the alternatives, period of administration and time of initiation.
  After a transurethral resection, bleeding risk might be higher than in the average surgical patients. If bleeding risk is a concern, mechanical prophylaxis is an alternative for patients at high risk of thrombosis.

- **Question 2:** Should pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing laparoscopic cholecystectomy?
In patients undergoing laparoscopic cholecystectomy, the ASH Latin American Guideline Panel suggests against thromboprophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

Patients at high risk of thromboembolism might benefit from thromboprophylaxis. For such minority of patients, recommendations 1 to 4 address the alternatives, period of administration and time of initiation.

Patients in whom laparoscopic cholecystectomy is conducted without admission to hospital or with a short stay (i.e. 1 night) likely do not benefit from thromboprophylaxis given the low risk of thrombosis. However, patient who remain hospitalized after the cholecystectomy, might benefit from prophylaxis (see recommendations about thromboprophylaxis in acutely and critically ill patients).

- **Question 3:** Should Pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing major general surgery?

In patients undergoing major general surgery, the ASH Latin American Guideline Panel suggests thromboprophylaxis over no prophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

Recommendations 1-4 address the alternatives, period of administration and time of initiation.

The panel considered that for patients undergoing major general surgery at average risk of bleeding, pharmacological and mechanical prophylaxis are reasonable alternatives. However, pharmacological prophylaxis is probably easier to implement

- **Question 4:** Should extended vs. standard course antithrombotic prophylaxis be used in surgical patients?

In surgical patients in whom thromboprophylaxis is preferred, the ASH Latin American Guideline Panel suggests short prophylaxis (7-10 days) over extended (30 days) prophylaxis (conditional recommendation based on very low certainty in the evidence about effects)

**REMARKS:**

This recommendation applies to the populations discussed on the recommendation 5 to 10.

Clinicians should asses the individual risk of thrombosis to apply this recommendation. The majority of surgical patients likely do not benefit from extended prophylaxis. However, patients at high risk of venous thromboembolism may be better off with extended prophylaxis

This recommendation does not apply to patients undergoing orthopedic surgery or oncologic surgery.

- **Question 5:** Should pharmacological prophylaxis vs. mechanical prophylaxis be used in patients undergoing surgery?

In surgical patients in whom thromboprophylaxis is preferred, the ASH Latin American Guideline Panel suggests either mechanical or pharmacological prophylaxis (conditional recommendation based on low certainty in the evidence about effects)

**REMARKS:**

This recommendation applies to the populations discussed on the recommendation 5 to 10.

The panel felt that pharmacological prophylaxis might be a better alternative for patients at high risk of venous thromboembolism. However, patients with an increased risk of bleeding may be better off with mechanical prophylaxis

The decision of using of mechanical or pharmacological prophylaxis should be individualized to the clinical scenario and to the specific patient’s values and preferences. Also, given that the risk of bleeding may change over time, this decision should be assessed frequently.

It is important to note that mechanical prophylaxis might fail due to an inappropriate use. Thus, providers should verify manufacturer instructions before the implementation.
**Question 6:** Should early vs. delayed antithrombotic administration be used in patients undergoing surgery?

In surgical patients in whom thromboprophylaxis is preferred, the ASH Latin American Guideline Panel suggests delayed prophylaxis (12 hours after surgery) over early administration (before surgery or within 12 hours post-surgery) (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

This recommendation applies to the populations discussed on the recommendation 5 to 10

If pharmacological prophylaxis is preferred, the time of initiation should be assessed on individual basis with the surgical team considering the risk of venous thromboembolism and risk of bleeding.

If mechanical prophylaxis is preferred, the decision should take into account the risk of venous thromboembolism versus the feasibility and burden of the intervention.

Patient who need hospitalization for a period of time before the surgery might benefit from prophylaxis (see recommendations about thromboprophylaxis in acutely and critically ill patients)

**Question 7:** Should pneumatic compression prophylaxis vs. graduated compression stockings be used in surgical patients?

In surgical patients in whom mechanical thromboprophylaxis is preferred, the ASH Latin American Guideline Panel suggests mechanical compression devices over compression stockings (conditional recommendation based on low certainty in the evidence about effects).

**REMARKS:**

This recommendation applies to the populations discussed on the recommendation 5 to 10.

Mechanical devices are not available in all the setting in Latin America. The difference between mechanical devices and compression stockings is likely small, therefore compression stockings are reasonable alternative for patients in whom mechanical prophylaxis preferred and there is limited availability of mechanical devices.

**Question 8:** Should pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing surgery following major trauma (indirect evidence)?

In patients with major trauma, the ASH Latin American Guideline Panel suggests thromboprophylaxis over no prophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

Recommendations 1 to 4 address the alternatives, period of administration and time of initiation.

In patients who are actively bleeding or at high risk of bleeding, mechanical prophylaxis may be preferable over pharmacological prophylaxis.

Patients who remain hospitalized after the surgery may have an increased risk of thrombosis due to the lack of deambulation (see the recommendations about thromboprophylaxis in acutely and critically ill patients)

**Question 9:** Should pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing radical prostatectomy?

In patients undergoing radical prostatectomy, the ASH Latin American Guideline Panel suggests against thromboprophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

Patients at high risk of venous thromboembolism (e.g. prostate cancer) may benefit from thromboprophylaxis. For such patients, recommendations 1 to 4 address the alternatives, period of administration and time of initiation.
After a radical prostatectomy, bleeding risk might be higher than in the average surgical patients. If bleeding risk is a concern, mechanical prophylaxis is an alternative for patients at high risk of thrombosis.

> **Question 10:** Should pharmacological prophylaxis vs. no pharmacological prophylaxis be used in patients undergoing major neurosurgical procedures?

The ASH guideline panel suggests not using pharmacological prophylaxis in patients undergoing major neurosurgical procedures (conditional recommendation based on very low certainty of the evidence about effects).

**REMARKS:**
Mechanical prophylaxis (pneumatic compression) is routinely used in this population.

**Prevention of VTE in Medical Hospitalized Patients**

> **Question 11:** Should mechanical prophylaxis vs. no prophylaxis be used in medical patients (acutely and critically ill)?

The ASH Latin American Guideline Panel suggests using mechanical prophylaxis over no prophylaxis in acutely or critically ill patients who cannot receive pharmacological prophylaxis (conditional recommendation based on moderate certainty in the evidence about effects).

> **Question 12:** Should any heparin vs. no heparin be used in acutely ill medical patients?

The ASH Latin American Guideline Panel suggests against using heparin in patients with high risk of venous thromboembolism (conditional recommendation based on low certainty in the evidence about effects).

**REMARKS:**
Although using thromboprophylaxis may not be the best option for the majority of acutely ill medical patients, clinicians should assess the individual risk of venous thromboembolism and bleeding before making the decision. Patients at high risk of thromboembolism and low risk of bleeding might benefit from prophylaxis.

The panel emphasize that the risk of venous thromboembolism and bleeding may change over time. Thus, frequent a assessment of the potential benefits and harms of thromboprophylaxis is needed.

> **Question 13:** Should aspirin vs. no anticoagulants be used in long distance (>4 hours) travelers?

The ASH Latin American Guideline Panel suggests against using aspirin for long distance travelers (more than 4 hours) (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**
This recommendation applies for different method of transportation. Patient at high risk of venous thromboembolism (i.e. previous VTE event, underlying cancer) might benefit from thromboprophylaxis. For this group, the panel felt that LMWH or stockings might offer a better option than aspirin.

At the time of development of this recommendation, there was no evidence about the effect of DOAC in long distance traveler.

> **Question 14:** Should any DOAC vs. other prophylactic LMWH be used in acutely ill inpatient medical patients?

The ASH Latin American Guideline Panel suggests using Low Molecular Weight Heparin (LMWH) over Direct Oral Anticoagulant (DOAC) in acutely ill medical patients who require pharmacological thromboprophylaxis (conditional recommendation based on moderate certainty in the evidence about effects).
Question 15: Should extended DOAC vs. shorter duration non-DOAC inpatient prophylaxis be used in acutely ill medical patients?

The ASH Latin American Guideline Panel suggests use a short period of Low Molecular Weight Heparin (LMWH) (for 6-10 days) over an extended course of direct oral anticoagulant (DOAC) (for 30-40 days) in acutely ill medical patients who require pharmacological thromboprophylaxis (conditional recommendation based on moderate certainty in the evidence about effects).

Question 16: Should LMWH vs. UFH be used in acutely ill medical patients?

The ASH Latin American Guideline Panel suggests using either Unfractioned Heparin or Low Molecular Weight Heparin in acute medical ill patients (conditional recommendation based on low certainty in the evidence about effects).

REMARKS:

The panel considered that both alternatives are likely equally effective and safe. However, price and access to LMWH is variable within the region.

UFH may be a reasonable alternative in settings where LMWH price is barrier. In situations where access to LMWH is not a concern, this option probably represents a more convenient alternative for patients and providers.

Question 17: Should pneumatic compression devices vs. graduated compression stockings be used in medical patients (acutely and critically ill)?

The ASH Latin American Guideline Panel suggests either compression stockings or mechanical compression device in acutely or critically ill patients who cannot receive pharmacological prophylaxis (conditional recommendation based on very low certainty in the evidence about effects).

REMARKS:

Compression stockings are generally more available than compression devices in most of the settings, thus, they might be the preferred option. If both alternative are available - stockings and compression devices – the panel considered that both are equally good alternatives, then the final decision should consider patient convenience and comfort.

Question 18: Should extended duration (i.e., up to 30 or 40 days) vs. regular duration (i.e., in hospital only) thromboprophylaxis be used in hospitalized medical patients (acutely ill and critically ill)?

The ASH Latin American Guideline Panel suggests use a short period of prophylaxis (for 6-10 days) over an extended period (for 30-40 days) in acutely ill medical patients who require pharmacological thromboprophylaxis (conditional recommendation based on low certainty in the evidence about effects).

REMARKS:

Patient at high risk of venous thromboembolism might benefit from an extended thromboprophylaxis.

Question 19: Should heparin vs. no heparin be used in critically ill patients?

The ASH Latin American Guideline Panel suggests the use of heparins (Unfractioned Heparin or Low Molecular Weight Heparin) in critically ill patients over no heparins (conditional recommendation based on moderate certainty in the evidence about effects).

REMARKS:

Clinicians should assess the individual risk of bleeding to apply this recommendation. Also, clinicians should be aware that the risk of venous thromboembolism or risk of bleeding may change during hospital stay. Thus, a frequent assessment is needed.

Question 20: Should thromboprophylaxis vs. no thromboprophylaxis be used in chronically ill medical inpatients (including nursing home patients)?
The ASH guideline panel suggests against using thromboprophylaxis over than no thromboprophylaxis in medical inpatients (including nursing home patients) (conditional recommendation based on very low certainty in the evidence about effects).

- **Question 21**: Should LMWH vs. no LMWH be used in long distance (>4 hours) travelers?

  The ASH Latin American Guideline Panel suggests against using LMWH for long distance travelers (more than 4 hours) (conditional recommendation based on very low certainty in the evidence about effects).

  **REMARKS**:

  This recommendation applies for different method of transportation. Patient at high risk of venous thromboembolism (i.e. previous VTE event, underlying cancer) might benefit from thromboprophylaxis. For this group, the panel felt that LMWH or stockings might offer a better option than aspirin.

  At the time of development of this recommendation, there was no evidence about the effect of DOAC in long distance traveler.

- **Question 22**: Should graduated compression stockings (GCS) vs. no GCS be used in long distance (>4 hours) travelers?

  The ASH Latin American Guideline Panel suggests against using compression stockings for long distance travelers (more than 4 hours) (conditional recommendation based on very low certainty in the evidence about effects).

  **REMARKS**:

  This recommendation applies for different method of transportation. Patient at high risk of venous thromboembolism (i.e. previous VTE event, underlying cancer) might benefit from thromboprophylaxis. For this group, the panel felt that LMWH or stockings might offer a better option than aspirin.

  At the time of development of this recommendation, there was no evidence about the effect of DOAC in long distance traveler.

**Treatment of Acute VTE**

- **Question 23**: Should lower dose of DOAC vs. standard dose of DOAC be used for Patients completed initial defined duration course of therapy who is going to continue on a direct oral anticoagulant?

  In patients in whom an indefinite duration of antithrombotic therapy is preferred after completion of an initial, defined duration course of therapy (3-6 months), The ASH Latin American Guideline Panel suggests using standard dose of DOAC over lower dose of DOAC (conditional recommendation based on low certainty in the evidence about effects).

  **REMARKS**:

  The evidence from effectiveness comes from studies in which patients who required extended anticoagulant therapy were excluded. Since this recommendation follows up the recommendations about indefinite treatment in individual with unprovoked events and provoked events by a chronic risk factor, the panel considered that the majority of these patients should not be treated with lower doses. However, lower doses may be appropriate for individual with a lower risk of thrombosis recurrence or high risk of bleeding.

- **Question 24**: Should continue aspirin plus anticoagulation vs. Anticoagulation alone be used for Patients with antithrombotic therapy with other indications for aspirin?

  In patients who use aspirin for primary cardiovascular prevention and initiate anticoagulation for a deep venous thrombosis or pulmonary embolism, the ASH Latin American Guideline Panel suggests against maintaining aspirin (conditional recommendation based on very low certainty in the evidence about effects)
**Question 25:** Should an indefinite duration of anticoagulation vs. a defined duration (3-6 months) be used in patients with a recurrent unprovoked DVT/PE?

In patients with a recurrent unprovoked deep venous thrombosis or pulmonary embolism, the ASH Latin American Guideline Panel recommends maintaining indefinite anticoagulation over discontinue it after a period of 3-6 months (strong recommendation based on moderate certainty in the evidence about effects).

**REMARKS:**

This recommendation assumes an average risk of bleeding and may not apply to patients with high risk of bleeding. Clinicians should be aware that bleeding may change over time, so the balance between the desirable and undesirable consequences of indefinite anticoagulation should be reassessed periodically.

**Question 26:** Should Home treatment vs. Hospital treatment be used for Patients with PE and low risk of complications?

In patients with pulmonary embolism and low risk of complication, the ASH Latin American Guideline Panel suggests using either home treatment or hospital treatment (conditional recommendation based on very low certainty in the evidence about effects).

**REMARKS:**

This recommendation does not apply to patients who have other conditions that would require hospitalization, have limited or no support at home, individuals who cannot afford medications or have history of poor compliance. Additionally, patients at high risk of bleeding may also need to start treatment in the hospital. Home treatment may not be feasible in some contexts due to health system limitations or insurance policies restrictions.

**Question 27:** Should Aspirin vs. Standard dose Anticoagulation be used for patients in whom an indefinite duration of antithrombotic therapy is preferred, after completion of an initial, defined duration course of therapy (12 months or less)?

In patients in whom an indefinite duration of antithrombotic therapy is preferred after completion of an initial, defined duration course of therapy (3-6 months), The ASH Latin American Guideline Panel suggests anticoagulation over aspirin (conditional recommendation based on moderate certainty in the evidence about effects).

**REMARKS:**

This recommendation places more value in the higher effectiveness of anticoagulation than in the lower cost of aspirin.

**Question 28:** Should an indefinite duration anticoagulation vs. a defined duration (3-6 months) be used in patients with a recurrent provoked DVT/PE?

In patients with a recurrent provoked deep venous thrombosis or pulmonary embolism, the ASH Latin American Guideline Panel suggests maintaining indefinite anticoagulation over discontinue it after a period of 3-6 months (conditional recommendation based on moderate certainty in the evidence about effects).

**REMARKS:**

This recommendation assumes that an appropriate thromboprophylaxis was carried out and may not apply to patient who didn’t not receive it. Also, the recommendation assumes a typical risk of bleeding and may not apply to patients with high risk of bleeding.

The final decision will likely vary depending of the severity of both thrombotic events (i.e. deep venous thrombosis vs pulmonary embolism) and the nature of the risk factor (i.e. minor risk factor such as hormone use versus major risk factor such as surgery)

**Question 29:** Should D-Dimer vs. no D-Dimer be used in to guide the duration of anticoagulation in patients with unprovoked DVT/PE?

In patients with unprovoked deep venous thrombosis or pulmonary embolism, the Latin American Guideline Panel suggests against routine use of D dimer to guide the duration of anticoagulation. Rather, the majority of individuals should be
managed according to recommendation 7 (conditional recommendation based on low certainty in the evidence about effects).

- **Question 30**: Should compression stockings in addition to anticoagulation vs. anticoagulation alone be used in patients with high risk of post-thrombotic syndrome?

  In patients with deep venous thrombosis and high risk of post-thrombotic syndrome, the ASH Latin American Guideline Panel suggests against using compression stockings in addition to anticoagulation (conditional recommendation based on very low certainty in the evidence about effects).

- **Question 31**: Should Thrombolytic therapy + Anticoagulation vs. Anticoagulation be used for Patients with extensive proximal DVT?

  In patients with extensive proximal deep venous thrombosis, the ASH Latin American Guideline Panel suggests against thrombolysis in addition to anticoagulation (conditional recommendation based on low certainty in the evidence about effects).

  **REMARKS**:

  Thrombolysis is reasonable to consider for patients with limb-threatening DVT, patients with severe symptoms who do not improve with anticoagulation alone and patients with iliofemoral DVT (high risk of PTS) with average to low risk of bleeding who are averse to the possibility of PTS.

  The final decision whether to or not thrombolysis should consider the baseline risk of experimenting and adverse event, patients’ values and preferences and access to experienced care.

- **Question 32**: Should prognostic scores vs. no prognostic score be used in to guide the duration of anticoagulation in patients with unprovoked DVT/PE?

  In patients with unprovoked deep venous thrombosis or pulmonary embolism, the Latin American Guideline Panel suggests against routine use of prognostic scores to guide the duration of anticoagulation. Rather, the majority of individuals should be managed according to recommendation 7 (conditional recommendation based on very low certainty in the evidence about effects).

  **REMARKS**:

  Prognostic models may be useful to determine the duration of anticoagulation when patients are undecided or the clinical situation is difficult.

- **Question 33**: Should DOAC vs. LMWH be used for Patients with DVT/PE during treatment with VKA?

  In patients with deep venous thrombosis or pulmonary embolism during treatment with Vitamin K Antagonist (VKA), The ASH Latin American Guideline Panel suggests using Low Molecular Weight Heparin (LMWH) over Direct Oral Anticoagulants (DOAC) (conditional recommendation based on very-low certainty in the evidence about effects).

  **REMARKS**:

  This recommendation places more value in the extensive experience of using LMWH in prothrombotic conditions.

  Additionally, this recommendation assumes that VKA failure was due to sub-optimal anticoagulation. In such cases, ensuring an optimal dosing of VKA may be the best alternative.

  The panel emphasizes that clinicians should explore the underlying cause of thrombosis in patients with thrombosis during VKA treatment.

  The final choice of treatment should take into account the underlying cause and also patients’ values and preferences, cost and feasibility of each alternative.
Question 34: Should thrombolytic therapy in addition to anticoagulation vs. anticoagulation be used in patients with sub-massive PE?

In patients with sub-massive PE, the ASH Latin American Guideline Panel suggests against the use of thrombolysis in addition to anticoagulation (conditional recommendation based on low certainty in the evidence about effects).

REMARKS:
Patients with high risk of dying due to pulmonary embolism and low risk of bleeding may benefit from thrombolysis.

The final decision whether provide to or not thrombolysis should consider the baseline risk of experimenting and adverse event, patients’ values and preferences and access to experienced critical care.

Question 35: Should Home treatment vs. Hospital treatment be used for Patients with DVT?

In patients with deep venous thrombosis, The ASH Latin American Guideline Panel Guideline Panel suggests home treatment over hospital treatment (conditional recommendation based on low certainty in the evidence about effects).

REMARKS:
This recommendation does not apply to patients who have other conditions that would require hospitalization, have limited or no support at home, individuals who cannot afford medications or have history of poor compliance. Additionally, patients with a limb-threatening DVT, at high risk of bleeding, or those requiring i.v. analgesics may also need to start treatment in the hospital.

Question 36: Should an indefinite duration of anticoagulation vs. a defined duration (3-6 months) be used in patients with unprovoked DVT/PE?

In patients with an unprovoked deep venous thrombosis or pulmonary embolism, the ASH Latin American Guideline Panel suggest maintaining indefinite anticoagulation over discontinue it after a period of 3-6 months (conditional recommendation based on moderate certainty in the evidence about effects).

REMARKS:
The final decision of maintaining or interrupting anticoagulation after an initial period should consider the individual risk of venous thromboembolism recurrence, the individual risk of bleeding, costs, access to follow-up and monitoring and patients´ values and preferences.

This recommendation applies to patients with average risk of bleeding. Clinicians should be aware that bleeding may change over time, so the balance between the desirable and undesirable consequences of indefinite anticoagulation should be reassessed periodically.

Question 37: Should DOAC vs. LMWH/VKA be used for Patients with DVT/PE?

In patients with deep venous thrombosis or pulmonary embolism, the ASH Latin American Guideline Panel suggests using Direct Oral Anticoagulants (DOAC) over Vitamin K Antagonist (VKA) (conditional recommendation based on moderate certainty in the evidence about effects).

REMARKS:
Patients who are well controlled and without complications with VKA may prefer to stay with VKA. Alternatively, patients who are initiating anticoagulation may prefer DOAC over VKA given the burden of treatment and the potential reduction of bleeding.

Additionally, DOAC may be a good alternative for situations when a reliable INR monitoring is not feasible or difficult.

The panel emphasize, that patients´ education regarding the risk of anticoagulation is equally important with DOAC, specially in situations where a close follow up is difficult.
Question 38: Should an indefinite duration anticoagulation vs. defined duration (3-6 months) be used in patients with provoked DVT/PE related to a chronic risk factor (e.g. chronic immobility)?

In patients with a provoked deep venous thrombosis or pulmonary embolism related to a chronic risk factor (e.g. tetraplegia), the ASH Latin American Guideline Panel recommends maintaining indefinite anticoagulation over discontinue it after a period of 3-6 months (strong recommendation based on moderate certainty in the evidence about effects).

REMARKS:

This recommendation is applicable only to risk factors that persists in time and confers a relatively high risk of VTE recurrence.

Additionally, this recommendation assumes a typical risk of bleeding and may not apply to patients with high risk of bleeding. Clinicians should be aware that bleeding may change over time, so potential benefit and harms of indefinite anticoagulation should be reassessed periodically.

Optimal Management of Anticoagulation Therapy

Question 39: Should resumption of oral anticoagulation therapy vs. discontinuation of oral anticoagulation therapy be used in patients receiving treatment for VTE who survive an episode of anticoagulation therapy related major bleeding?

In patients receiving treatment for VTE who survive an episode of anticoagulation therapy related major bleeding, The ASH Latin American Guideline Panel suggests resumption of oral anticoagulation therapy over discontinuation of oral anticoagulation therapy (conditional recommendation based on very low certainty in the evidence about effects).

REMARKS:

The decision of resuming anticoagulation may vary with the risk of recurrent VTE and bleeding as well the severity of the bleeding event experienced by the patient.

Question 40: Should specialized anticoagulation management service care vs. care provided by the patient’s physician be used in patients receiving anticoagulation therapy for treatment of VTE?

In patients receiving anticoagulation therapy for treatment of deep venous thrombosis or pulmonary embolism, The ASH Latin American Guideline Panel suggests specialized care in anticoagulation management service over care provided by treating physician (conditional recommendation based on very low certainty in the evidence about effects).

REMARKS:

The use of anticoagulation management services is especially important in places where general physician care is limited and likely do not offer adequate anticoagulation management or patients’ education. In places where anticoagulation clinic implementation is not possible (e.g. due to geographic location), innovative approaches using technology may still allow to provide the service.

Question 41: Should 4-factor prothrombin complex concentrates (PCC) vs. fresh-frozen plasma (FFP), in addition to temporary cessation of VKA and intravenous vitamin K be used in patients with VKA-related life-threatening bleeding during treatment for VTE?

In patients with VKA-related life-threatening bleeding during treatment for VTE, The ASH Latin American Guideline Panel suggests using either 4-factor prothrombin complex concentrates (PCC) or fresh-frozen plasma (FFP) according to local availability and clinical circumstances (conditional recommendation based on very low certainty in the evidence about effects).

REMARKS:

The panel emphasizes that clinician should favor the fastest option according to the local availability.
Patients with heart disease in whom volume overload is considered a significant risk might benefit from 4-factor prothrombin complex concentrates.

Also, when patients place a high value in avoiding infection transmission, or in places where transfusion related infection are relatively frequent, 4-factor prothrombin complex concentrates may be a better option.

In the many setting on the region, there is limited availability of 4-factor prothrombin complex concentrates. In such scenarios, FFP is a good alternative to revert VKA effects.