

Effects of rivaroxaban (Xarelto®) and apixaban (Eliquis®) on commonly used coagulation assays

Coagulation Assays		Xarelto® Effects	Eliquis® Effects
PT (sec)		↑	↑ (weak)
APTT (sec)		↑	↑ (weak)
Fibrinogen	Clauss method	=	=
	Derived Fibrinogen	↓	=
Thrombin Time TT		=	=
Factor assays (clotting assays)		↓ ⁽¹⁾	↓ ⁽¹⁾ (weak)
Immunological assays (DDI, VWF: Ag, inhibitors, ...)		=	=
Anti-Xa activity (UFH or LMWH)		↑	↑
Antithrombin activity	FXa-based assay	↑	↑
	FIIa-based assay	=	=
Protein C activity	Chronometric assay	↑	↑
	Chromogenic assay	=	=
Protein S activity	Chronometric assay	↑	↑
	Free Protein S Ag ⁽²⁾	=	=
Lupus anticoagulant testing : "sensitive" APTT and dRVVT (screening, mixing, confirmation)		↑	↑
Screening for ACL and anti-β2GPI antibodies		=	=
Resistance to activated Protein C		↑	↑
FV Leiden mutation and 20210A mutation		=	=

Sources :

Rivaroxaban et tests de biologie médicale V1 Octobre 2012 - GEHT

Assessment of apixaban plasma levels by laboratory tests: suitability of three anti-Xa assays.

A multicentre French GEHT study. Gouin-Thibault et al. Thromb Haemost. 2013 Oct 31;111⁽²⁾.

Impact of apixaban on routine and specific coagulation assays: a practical laboratory guide.

Douxflis et al. Thromb Haemost. 2013 Aug;110⁽²⁾:283-94. doi: 10.1160/TH12-12-0898.

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↑ : increase - ↓ : decrease

"=" : no effect

(1) : decrease at high rivaroxaban concentrations

(2) : some qualitative defects may need to be considered



Effects of dabigatran (Pradaxa®) on commonly used coagulation assays

Assays		Effects
PT (sec)		↑
APTT (sec)		↑
Fibrinogen	Clauss method	= / ↓
	Derived Fibrinogen	↓
Thrombin Time TT		↑
Factor assays (clotting assays)		↓
Immunological assays (DDI, VWF: Ag, inhibitors, ...)		=
Anti-Xa activity (UFH or LMWH)		=
Antithrombin activity	FXa-based assay	=
	FIIa-based assay	↑
Protein C activity	Chronometric assay	↑
	Chromogenic assay	=
Protein S activity	Chronometric assay	↑
	Free Protein S Ag ⁽²⁾	=
Lupus anticoagulant testing : "sensitive" APTT and DRVVT (screening, mixing, confirmation)		↑
Screening for ACL and anti-β2GPI antibodies		=
Resistance to activated Protein C		↑
FV Leiden mutation and 20210A mutation		=

Source :

Dabigatran et examens de biologie médicale V2
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↑ : increase - ↓ : decrease

"=" : no effect

(2) : some qualitative defects may need to be considered



Diagnostica Stago S.A.S.
RCS Nanterre B305 151 409
3, allée Thérésa
92600 Asnières sur Seine
France
Ph.: +33 (0)1 46 88 20 20
Fax: +33 (0)1 47 91 08 91
webmaster@stago.com
www.stago.com