## Blood Coagulation

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## Participant No.

## Your Results On Survey 1246: January 2021

Sample 21/10, was from a donor with APC resistance.

## V1.1 Laboratory Programme: Thrombophilia Exercise.

This sample was provided together with clinical details for investigation of possible heritable thrombophilia. Analysis of your results, and those of other UK NEQAS participants, are given on the following pages.

Performance analysis of Protein C (PC), Protein S (PS), Antithrombin (AT), APC resistance and Plasminogen is based on the quantile grading (A to E) system. Grades are recorded in upper and lower case, indicating whether the results were above or below the median respectively. For cumulative grades, this will aid in assessment of bias. Sub-groups used for analysis include AT antigen ( $\mathrm{u} / \mathrm{dl}$ or $\mathrm{mg} / \mathrm{dl}$ ), AT activity (enzyme substrate), PC activity (chromogenic/clotting based assay), and APC resistance (by kit source). PS activity kitspecific medians are calculated but grades are not currently assigned. Grading assessment is not currently applied to subgroups of less than 20 users.

Please note: for assays assessed with the A-E grading system, $\mathbf{Z}$ scores have been calculated and included on this report - please see the survey newsletter for more information.

The following patient history was provided to accompany the sample:
This patient is a 50 year old man who suffered a first DVT following a long haul flight. He was anticoagulated for 3 months. This sample was taken 3 months after cessation of anticoagulant therapy. There is no family history of thromboembolic disease

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| Assay | Protein C Antigen | Protein C Activity | Protein S Total Ag | Protein S Free Ag | Protein S Activity | Antithrombin Antigen | Antithrombin Activity | APC <br> Resistance | Plasminogen |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample No: | 21/10 | 21/10 | 21/10 | 21/10 | 21/10 | 21/10 | 21/10 | 21/10 | 21/10 |
| Your method | - |  | - | PS | - |  |  |  | - |
| Your result | - |  | - |  | - |  |  |  | - |
| Units | - | u/dl | - | u/dl | - | u/dl | u/dl | Normalized Ratio |  |
| Your normal range | - | 70-140 | - | 72-126 | - | 80-120 | 70-150 | 0.72-1.8 | - |
| Subgroup for analysis | - |  | - | \% Free PS | - | u/dl | Factor Xa |  | - |
| Participants in group | - | 278 | - | 260 | - | 21 | 217 | 23 | - |
| Total participants | 25 | 287 | 15 | 260 | 46 | 24 | 311 | 191 | 55 |
| Median result | - | 98 | - | 116.6 | - | 89.5 | 92 | 0.47 | - |
| \% deviation | - |  | - |  | - |  |  |  | - |
| Z-Score | - | -1.39 | - | -1.04 | - | -2.6 | 0.7 | 0.4 | - |
| Your performance grade | - | c | - | b | - | d | A | A | - |
| Interquartile Range " A "- grade | - | 95.6-100 | - | 109-121.7 | - | 85.9-93.9 | 88-95 | 0.45-0.48 | - |
| Your cumulative grades | - | A/b/c | - | E/a/b | - | - /*/d | a/A / A | B / b / A | - |
| Cumulative performance | - | Within Consensus | - | Within Consensus | - |  | Within Consensus | Within Consensus | - |
| Your interpretation | - | Normal | - | Normal | - | Abnormal | Normal | Abnormal | - |
| Overall Interpretations (\%) <br> Normal <br> Borderline <br> Abnormal | $\begin{gathered} 100 \\ 0 \\ 0 \end{gathered}$ | $\begin{gathered} 99.3 \\ 0.7 \\ 0 \end{gathered}$ | $\begin{gathered} 100 \\ 0 \\ 0 \end{gathered}$ | $\begin{aligned} & 98 \\ & 0.4 \\ & 1.6 \end{aligned}$ | $\begin{gathered} 93.3 \\ 0 \\ 6.7 \end{gathered}$ | $\begin{gathered} 91.3 \\ 4.3 \\ 4.3 \end{gathered}$ | $\begin{gathered} 97.7 \\ 2 \\ 0.3 \end{gathered}$ | $\begin{gathered} 1.6 \\ 1.6 \\ 96.8 \end{gathered}$ | $\begin{gathered} 96.2 \\ 0 \\ 3.8 \end{gathered}$ |
| Notes | - | - | - | - | - | - | - | - | - |



*     - Where there are less than 20 users in a particular subgroup, performance grades have not been assigned.
**- Performance is only assigned when based on 2 or more results. *** too few results for $Z$ score analysis


## Overall diagnosis:

All 66 centres providing a diagnosis and performing a full thrombophilia screen reported APC resistance, many suggesting FVL heterozygosity. 27 centres performed partial thrombophilia screens. 1 of these reported APCr resistance. The remaining 26 centres not performing APCr reported normal results.




Survey






