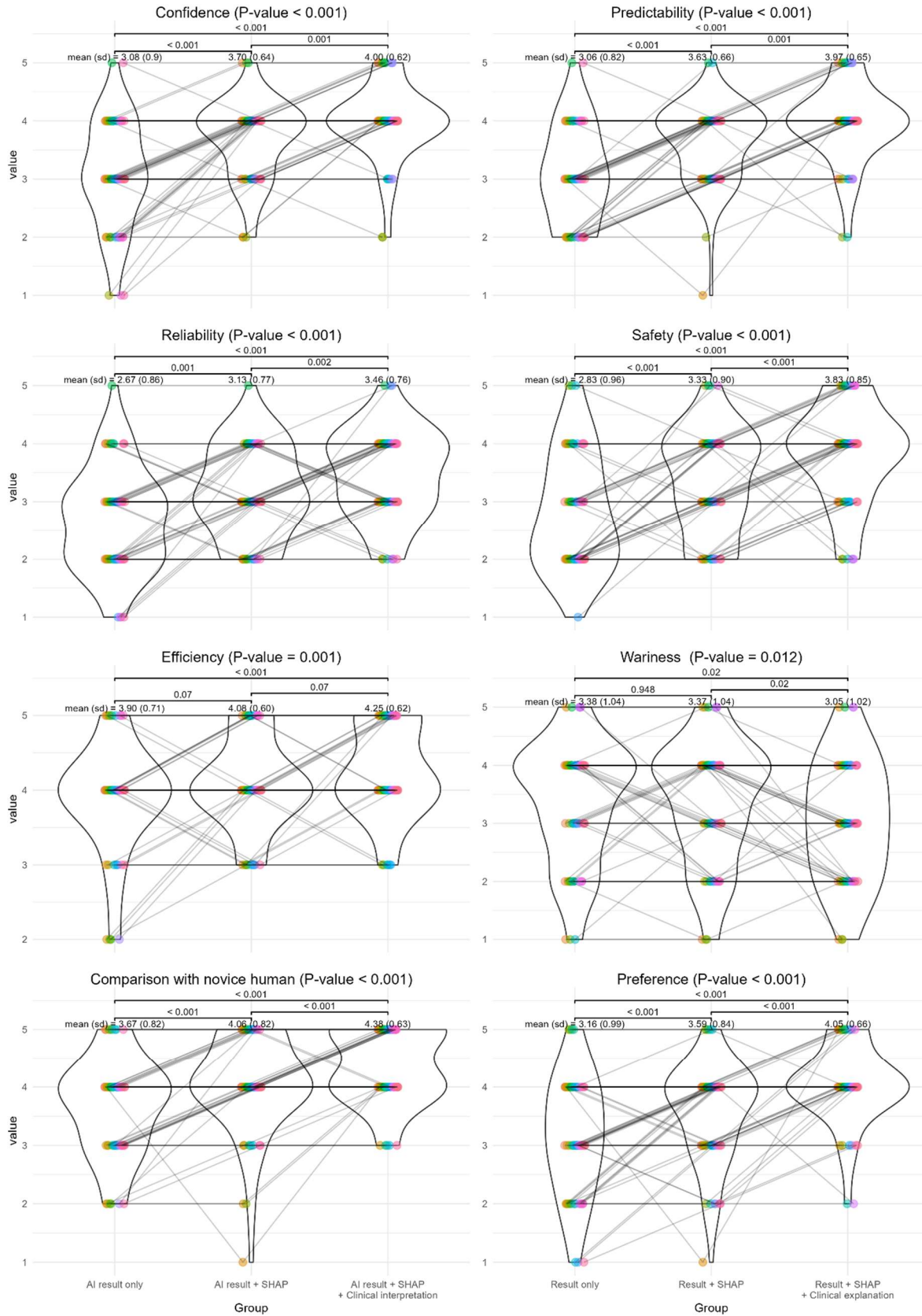
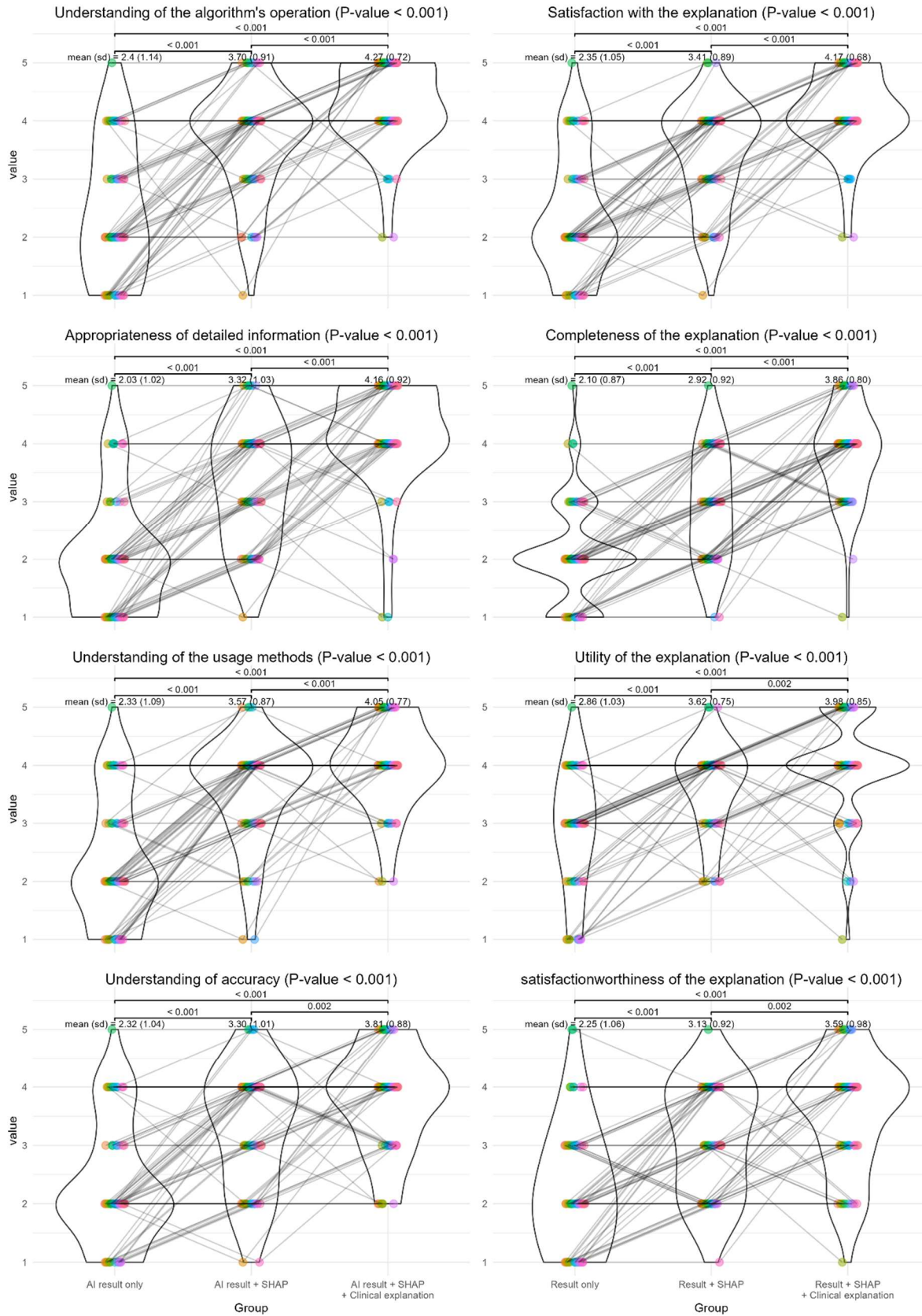




Supplementary Figure 1. Friedman test and Conover's post-hoc analysis for each item of the Trust Scale Recommended for XAI



Supplementary Figure 2. Friedman test and Conover's post-hoc analysis for each item of the Explanation Satisfaction Scale

Supplementary Table 1. Friedman test for each item of the System Usability Scale across the three conditions

Question	Result only, Mean (SD)	Result + SHAP, Mean (SD)	Result + SHAP + Clinical interpretation, Mean (SD)	P-value
1. I think I would like to use this system frequently.	2.97 (1.08)	3.63 (0.83)	4.08 (0.75)	< 0.001
2. I found the system unnecessarily complex.	1.97 (0.80)	1.97 (0.72)	1.94 (0.90)	0.754
3. I thought the system was easy to use.	3.60 (0.96)	3.94 (0.95)	4.17 (0.58)	< 0.001
4. I think I would need the support of a technical person to be able to use this system.	2.89 (1.26)	2.86 (1.32)	2.60 (1.25)	0.257
5. I found the various functions in this system were well integrated.	2.81 (1.06)	3.59 (0.78)	3.83 (0.79)	< 0.001
6. I thought there was too much inconsistency in this system.	2.49 (0.90)	2.02 (0.61)	1.84 (0.68)	< 0.001
7. I would imagine that most people would learn to use this system very quickly.	3.71 (0.99)	3.95 (0.89)	4.11 (0.79)	0.018
8. I found the system very cumbersome to use.	2.00 (0.88)	1.94 (0.74)	1.87 (0.75)	0.721
9. I felt very confident using the system.	2.75 (1.06)	3.30 (0.94)	3.49 (0.93)	< 0.001
10. I needed to learn a lot of things before I could get going with this system.	2.37 (1.18)	2.22 (1.05)	2.33 (1.14)	0.825
Overall System Usability Scale	60.32 (15.76)	68.53 (14.68)	72.74 (11.71)	< 0.001

Supplementary Table 2. Subgroup analysis of mean WOA, SUS, Trust, and Explanation Satisfaction scores by clinician designation using the Friedman test

	Designation	Result only, Mean (SD)	Result + SHAP, Mean (SD)	Result + SHAP + Clinical interpretation, Mean (SD)	<i>P</i> -value
Weight of Advice	Faculty	0.34 (0.33)	0.57 (0.31)	0.73 (0.30)	0.001
	Fellow	0.61 (0.38)	0.75 (0.23)	0.77 (0.28)	0.135
	Resident	0.51 (0.34)	0.59 (0.34)	0.73 (0.25)	0.004
System Usability Scale	Faculty	60.68 (21.91)	78.41 (11.95)	78.86 (9.90)	0.033
	Fellow	67.22 (13.43)	76.39 (13.64)	76.39 (10.01)	0.002
	Resident	58.78 (14.32)	64.36 (13.86)	70.41 (11.91)	< 0.001
Trust Scale Recommended for XAI	Faculty	24.64 (5.45)	28.73 (3.52)	30.55 (2.30)	0.001
	Fellow	27.33 (3.71)	29.67 (2.45)	31.33 (1.41)	0.028
	Resident	25.70 (4.39)	28.77 (4.03)	31.02 (4.11)	< 0.001
Explanation Satisfaction Scale	Faculty	15.91 (7.29)	28.64 (5.14)	31.55 (4.27)	0.001
	Fellow	18.56 (7.45)	26.89 (5.71)	33.67 (3.24)	< 0.001
	Resident	19.35 (7.13)	26.56 (5.87)	31.60 (5.64)	< 0.001

Supplementary Table 3. Subgroup analysis of mean WOA, SUS, Trust, and Explanation Satisfaction Scale by clinical department using the Friedman test

	Department	Result only, Mean (SD)	Result + SHAP, Mean (SD)	Result + SHAP + Clinical interpretation, Mean (SD)	<i>P</i> -value
Weight of Advice	Medical department	0.53 (0.31)	0.64 (0.32)	0.79 (0.23)	0.001
	Surgical department	0.48 (0.39)	0.50 (0.33)	0.58 (0.29)	0.670
	Emergency department	0.43 (0.37)	0.69 (0.29)	0.83 (0.16)	0.001
	Miscellaneous departments	0.58 (0.31)	0.65 (0.41)	0.82 (0.23)	0.368
System Usability Scale	Medical department	58.65 (13.81)	63.96 (13.39)	70.42 (9.29)	< 0.001
	Surgical department	57.88 (15.80)	67.88 (10.92)	69.12 (13.77)	< 0.001
	Emergency department	63.57 (20.18)	78.57 (11.84)	79.11 (10.95)	0.010
	Miscellaneous departments	69.00 (8.02)	65.00 (28.12)	80.50 (5.12)	0.165
Trust Scale Recommended for XAI	Medical department	26.38 (5.23)	28.92 (4.22)	30.54 (4.31)	< 0.001
	Surgical department	25.05 (3.47)	28.95 (3.47)	30.90 (3.84)	< 0.001
	Emergency department	24.50 (4.13)	29.29 (2.70)	31.36 (1.82)	< 0.001
	Miscellaneous departments	29.00 (4.47)	27.40 (5.32)	32.40 (1.95)	0.128
Explanation Satisfaction Scale	Medical department	20.46 (8.35)	27.21 (6.19)	32.00 (5.82)	< 0.001
	Surgical department	17.95 (6.39)	25.65 (5.29)	31.00 (5.38)	< 0.001
	Emergency department	15.79 (5.96)	29.36 (3.71)	32.14 (4.28)	< 0.001
	Miscellaneous departments	20.60 (6.11)	24.40 (8.17)	34.20 (2.59)	0.015

Supplementary Data 1. Full case report form (CRF) data.xlsx