# Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Malhotra A, Dhutia H, Finocchiaro G, et al. Outcomes of cardiac screening in adolescent soccer players. N Engl J Med 2018;379:524-34. DOI: 10.1056/NEJMoa1714719

### Supplementary Appendix

#### **Outcomes of Cardiac Screening Adolescent Soccer Players**

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Table of Contents	<u>Page</u>
Members of Cardiology Consensus Group	3
Figure S1: Football Association Pre-Cardiac Screening Health Questionnaire	4
Table S1: Clinical Features and Outcomes of Athletes with Wolff-Parkinson-Whit	е
ECG Pattern	7

The following authors are members of the Cardiology Consensus Group of the English Football Association:

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## Figure 1S: The Football Association Pre-Cardiac Screening Health Questionnaire





Please fully complete the questionnaire in black ink

Players full name	
Date of Birth	
Club Doctor & address	
Home Address	Name and Address of GP

Postcode			Postcode	
TEL			TEL	
Serious illnesses requiring hospitalisation	Yes – No		Date/ Details/ Medication	
Operative procedures	Yes – No		Date/ Details/ Medication	
Any other serious injuries e.g. Fractures	Yes – No	ĺ	Date/ Details/ Medication	

### ETHNICITY (Circle as appropriate)

WHITE M	IXED	BLACK		ASIAN	OTHER	
British W	hite & Black	Caribbean		Indian	Chinese	
	hite & Asian	East African		Pakistani	Filipino	
	hite & Other	West African		Bangladeshi	Vietnamese	
	ther	North African		Other	Other	
If other please specify:						
HAVE YOU EVER FAINTED	(circle as appropri	ate)				
During exercise		es – No	How r	ecently did this occur	and describe	
ollowing exercise	Ŷ	es – No	How r	ecently did this occur	and describe	
Jnrelated exercise	Ŷ	es – No	How r	ecently did this occur	and describe	
IAVE YOU EVER HAD ANY	DIZZY SPELLS (cir	cle as appropriate)				
During exercise	Y	es – No How		ow recently did this occur and describe		
Following exercise	Ŷ	es – No	How r	w recently did this occur and describe		
Unrelated exercise	Y	es – No	How r	w recently did this occur and describe		
HAVE YOU EVERY EXPERIE	NCED CHEST PAIN	I, HEAVINESS, OR TI	IGHTNE	SS (circle as appropri	ate)	
During exercise	Y	es – No	How r	ow recently did this occur and describe		
Following exercise	Y	es – No	How r	w recently did this occur and describe		
Unrelated exercise	Y	es – No	How recently did this occur and describe			
HAVE YOU EVER HAD PALE	PITATIONS? Y	es – No	How r	ecent did this occur?	Describe the circumstance	
ARE YOU MORE EASILY TIF	RED THAN Y	es – No	How r	w recent did this occur? Describe the circumstances		
OUR TEAM MATES?						
OO YOU FEEL MORE BREA	THLESS? Y	es – No	How r	ecent did this occur?	Describe the circumstance	
S THERE ANY FAMILY HIST	ORY OF THE FOLI	OWING (circle as a	ppropri	ate)		
			D	a second first sector of the	entermal state or contract to	

High blood pressure	Yes – No
High Cholesterol	Yes – No
Diabetes	Yes – No
Heart disease under 50 years	Yes – No
Wolff-Parkinson-White Syndrome	Yes – No

Please specify to include maternal side or paternal side

HOW MANY DAYS A WEEK ARE YOU PHYSICALLY ACTIVE PLAYING SPORTS

HOW MANY HOURS A WEEK ARE YOU PHYSICALLY ACTIVE PLAYING SPORTS

Please specify

Player's Name .....

If there is anything else health related that is not covered in any of the above please provide us with the information in the box below.

Additional health information

I the (circle as appropriate) Player/ Parent/ Guardian confirm that I have accurately, to the best of my knowledge, fully completed this form.

Signature	
Print name	
Date	

The Football Association, St George's Park, Newborough Road, Needwood, Burton on Trent, DE13 9PD

### Table S1: Clinical Features and Outcomes of Athletes with Wolff-Parkinson-White ECG Pattern.

	Age	Sex	Ethnicity	History & Examination	ECG	Echo	LGE on CMR	Exercise testing	Gene testing	Outcome
WPW	16	Male	White	Negative	PR interval 106ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 110ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	15	Male	White	Negative	PR interval 99 ms with right-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 96ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	17	Male	White	Negative	PR interval 111ms with postero-septal accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. One episode of 5 beat run of SVT during peak exercise that self-terminated.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 86ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 98 ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play

Condition	Age	Sex	Ethnicity	History & Examination	ECG	Echo	LGE on CMR	Exercise testing	Gene testing	Outcome
WPW	16	Male	White	Negative	PR interval 102 ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	15	Male	White	Negative	PR interval 118ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 115 ms with postero-septal accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 99ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	17	Male	White	Negative	PR interval 104ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	17	Male	White	Negative	PR interval 119ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia.	N/A	Underwent ablation and returned to play
WPW	15	Male	White	Negative	PR interval 98ms with right-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play

Condition	Age	Sex	Ethnicity	History & Examination	ECG	Echo	LGE on CMR	Exercise testing	Gene testing	Outcome
WPW	16	Male	Black	Negative	PR interval 105ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 98ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 107ms with right-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 103ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 97ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 106ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 66ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	15	Male	White	Negative	PR interval 72ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play

Condition	Age	Sex	Ethnicity	History & Examination	ECG	Echo	LGE on CMR	Exercise testing	Gene testing	Outcome
WPW	16	Male	White	Negative	PR interval 110ms with postero-septal accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	16	Male	White	Negative	PR interval 117ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Persistence of conduction through accessory pathway. No arrhythmia	N/A	Underwent ablation and returned to play
WPW	17	Male	White	Negative	PR interval 98ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Disappearance of conduction across the accessory pathway when heart rate >120bpm. No arrhythmia	N/A	Underwent EPS only; deemed low-risk pathway (antegrade refractory period>250 ms). Player chose not to undergo ablation. Returned to play.
WPW	16	Male	White	Negative	PR interval 106ms with left-sided accessory pathway	Normal	N/A	Asymptomatic. Disappearance of conduction across the accessory pathway when heart rate >140bpm. No arrhythmia	N/A	Underwent EPS only; deemed low-risk pathway (antegrade refractory period>250 ms). Player chose not to undergo ablation. Returned to play.

Echo denotes echocardiogram, EPS denotes electrophysiology study, N/A denotes not applicable, SVT denotes supraventricular tachycardia, WPW= Wolff-Parkinson-White ECG pattern.