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### Appendix

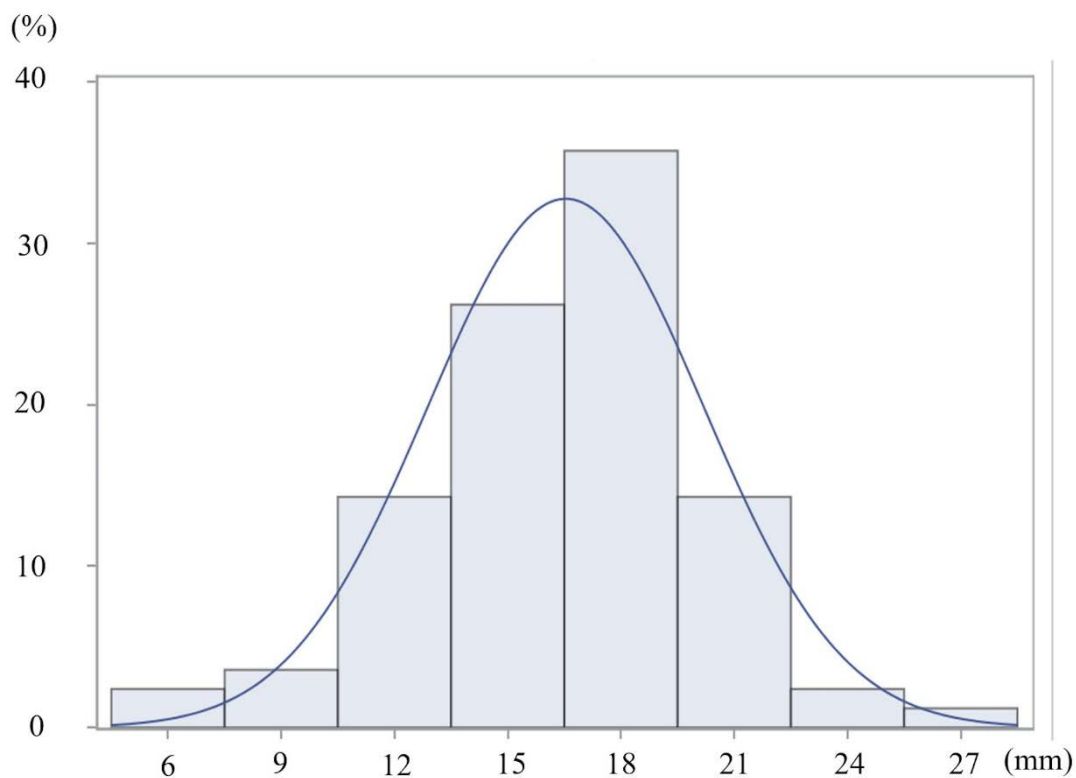


Figure 1. Normal distribution of the minimum distances to the femoral nerve at 90°.

Measurements showed normal distribution in Kolmogorov-Smirnov test (mean 16.5mm, median 17mm, variance 13.4, and standard deviation 3.7).

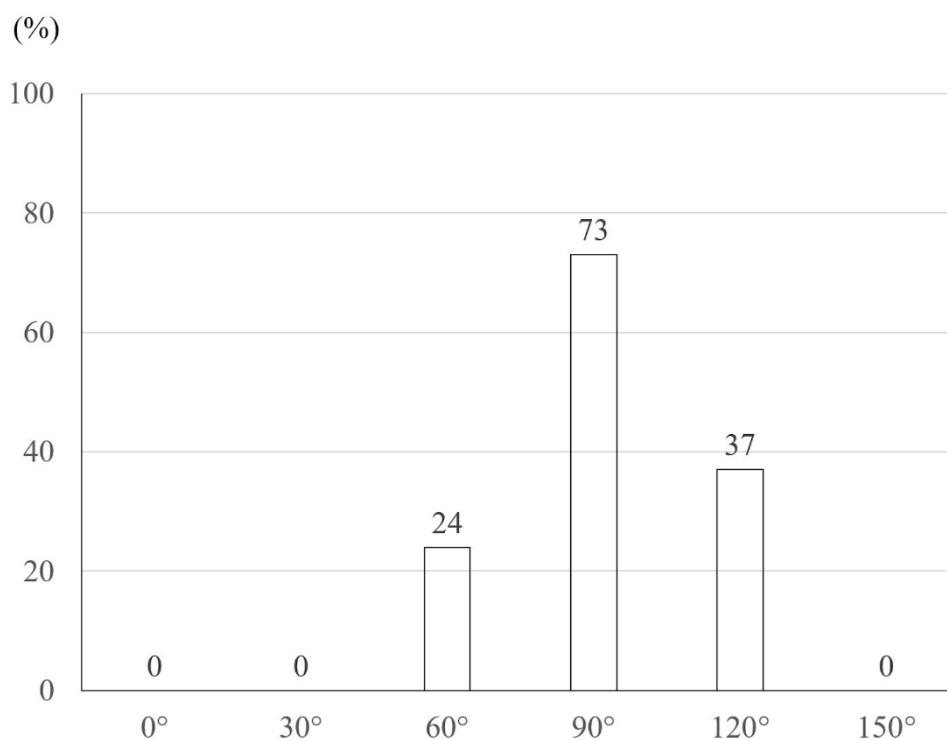


Figure 2. Distribution of the angle at the minimum distances to the femoral nerve

The minimum distance shows that 73% (61 of 84 joints) were 90°, 37% (31 of 84 joints) were 120°, and 24% (20 of 84 joints) were 60°. Duplication is allowed such case as same minimum distances in two or more points. On the other hand, the minimum distance is not observed at the angle 0°, 30°, or 150°. Therefore, it is indicated that the femoral nerve is close to the anterior acetabular rim between 60° and 120° and is closest at 90°.

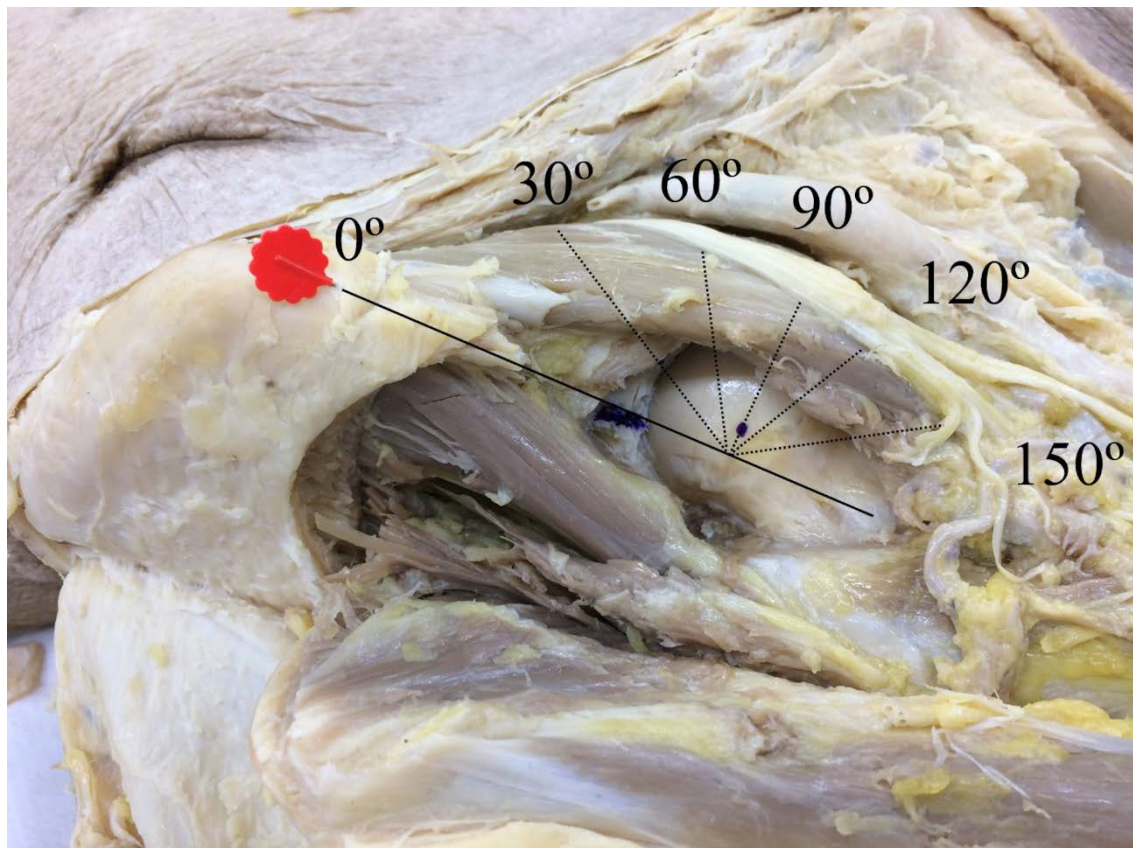


Figure 3. Schema of the minimum distances to the femoral nerve at each angle in the right hip. Reference line (0°) through the anterior superior iliac spine with red pin shows in solid line. Each measurement line in dotted lines indicates that the anatomical course of the femoral nerve is closest to the rim at 90° and goes away from the center of the acetabulum.

Table I Mixed effects model for repeated measure of the minimum distances to the femoral nerve at each angle

Angle (degrees)	Angle (degrees)	<i>P</i> value
0	30	<.001
0	60	<.001
0	90	<.001
0	120	<.001
0	150	<.0001
30	60	<.001
30	90	<.001
30	120	<.001
30	150	0.153
60	90	0.003
60	120	0.931
60	150	<.001
90	120	0.060
90	150	<.001
120	150	<.001

Difference of the minimum mean-square value. Tukey-Kramer test as a post hoc test.

Table II Correlation matrix of each variables

	Thickness of the capsule	Thickness of the iliopsoas muscle	Width of the iliopsoas muscle	Femoral head diameter	Inguinal ligament length	Femoral length	Age
Sex	0.302 0.005	0.247 0.024	0.463 <.001	0.739 <.001	0.175 0.111	0.598 <.001	-0.154 0.151
Age	-0.208 0.057	-0.074 0.506	-0.042 0.704	-0.366 <.001	-0.111 0.314	-0.239 0.025	
Femoral length	0.290 0.007	0.202 0.065	0.160 0.146	0.663 <.001	0.218 0.047		
Inguinal ligament length	0.133 0.228	0.100 0.365	0.187 0.089	0.162 0.142			
Femoral head diameter	0.417 <.001	0.288 0.008	0.354 0.001				
Width of the iliopsoas muscle	0.309 0.004	0.423 0.001					
Thickness of the iliopsoas muscle	0.180 0.101						

Pearson correlation coefficient (above) and p value (below)