DPH101/ENV203

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Exercise 1

Can we conclude that patients with primary hypertension (PH), on the average, have higher total cholesterol levels than normotensive (NT) patients? This was one of the inquiries of interest for Rossi et al.[1] In the following table are total cholesterol measurements (mg/dl) for 133 PH patients and 41 NT patients. Produce a graph that compares the two total cholesterol measurements of the two groups. Complete the ten-step hypothesis testing procedure using a Type I error rate of 5%. In addition, calculate a 95% confidence interval of the difference in means.

Submit your assignment on ICE by 8:55 AM Monday 25 November.

Table 1: Total cholesterol measurements (mg/dl) of 133 patients with primary hypertension

207	221	212	220	190	172	223	260	214	245
191	181	210	215	171	221	217	265	206	261
203	208	206	247	182	241	202	198	221	162
208	218	210	199	182	199	216	211	196	225
185	168	274	239	203	235	168	223	199	195
214	214	175	244	178	134	203	203	214	240
226	280	168	236	222	222	203	178	249	117
213	225	217	212	252	272	227	200	259	203
185	239	226	189	245	181	265	207	235	218
238	228	232	239	152	141	226	182	239	231
203	236	215	210	237	222	195	239	203	221
284	210	188	180	183	207	237	276	266	224
231	226	258	251	222	224	214	212	174	206
260	201	219							

Table 2: Total cholesterol measurements (mg/dl) of 41 normotensive patients.

286	189	226	196	187	142	204	179	203	212
206	163	196	196	168	189	229	142	184	168
186	121	281	203	177	135	179	161	194	206
219	173	189	194	196	212	168	188	232	242
200									

References

1. Rossi GP, Taddei S, Virdis A, Cavallin M, Ghiadoni L, Favilla S, Versari D, Sudano I, Pessina AC, Salvetti A. The $T^{786}C$ and Glu298Asp polymorphisms of the endothelial nitric oxide gene affect the forearm blood flow responses of Caucasian hypertensive patients. *J Am Coll Cardiol* 2003;41(6):938-45.