1. **Pulmonary Disease:** The data in Table 1 concerns the mean triceps skin-fold thickness in a group of normal men and a group of men with chronic air flow limitation.

Group	Mean	sd	n
Normal	1.35	.5.	40
Chronic Airflow limitation	0.92	0.4	32

Table 1. Triceps skin-fold thickness in normal men and men with chronic airflow limitation. Source: Reprinted with permission of *Chest,58S-59S, 1984*

1.a. What is the standard error of the mean for each group?
1.b. Assume that the central-limit theorem is applicable. What does it mean in this context?

2. **Renal Disease:** A study of psychological and physiological changes in a cohort of dialysis patients with end-stage renal disease was conducted. 102 patients were initially ascertained at baseline; 69 of the 102 patients were reascertained at an 18-month follow-up visit. The data in Table 2 were reported. Provide a point and interval estimate (95% confidence interval) for the mean of each of the parameters at baseline and follow-up.

	Baseline (n=102)		18-month follow up (n=69)	
Variable	mean	sd	mean	sd
Serum creatinine (mmol/L)	0.97	0.22	1.0	.19
Serum potassium (mmol/L)	4.43	.64	4.49	0.71
Serum phosphate (mmol/L)	1.68	0.47	1.57	0.40
Psychological Adjustment to Illness (PAIS) scale	36.5	16.08	23.27	13.79

Table 2. Psychological and physiological parameters in patients with end stage renal disease.

3. Much discussion has taken place concerning possible health hazards from exposure to anesthetic gases. In one study conducted in 1972, 525 Michigan nurse anesthetists were surveyed by mail questionaires and telephone interviews to determine the incidence rate of cancer. Of this group, 7 women reported having a new malignancy other than skin cancer during 1971.
3.a. What is the best estimate of the 1971 incidence rate from these data?
3.b. Provide a 95% CI for the true incidence rate.