7 Warr D, McKinney S, Tannock I. Influence of measurement error on response rates. *Cancer Treat Rep* 1985;**69**:1127-30.
8 Silverberg E. Cancer statistics 1985. *CA* 1985;**35**:19-35.
9 Johnson BE, Ihde DC, Bunn PA, *et al.* Patients with small cell lung cancer treated with combination chemotherapy with or without irradiation. *Ann Intern Med* 1985;**103**:430-9.
10 Hande KR, Des Prez RM. Current perspectives in small cell lung cancer. *Chest* 1984;**85**:669-77.
11 Morstyn G, Ihde DE, Lichter AS, *et al.* Small cell lung cancer 1973-1983: early progress and recent obstacles. *Int J Radiat Oncol Biol Phys* 1984;**10**:515-39.
12 Johnson BE, Ihde DE, Lichter AS, *et al.* Five to 10 year follow up of small cell lung cancer (SCLS) patients disease free at 30 months: chronic toxicities and late relapse. *Proceedings of the American Society of Clinical Oncology* 1984;**25**:218.
13 Kalter S, Farha F, Carr DT, *et al.* Long term survivors with small cell lung cancer (SCLC): the MD Anderson experience 1972-1980. *Proceedings of the American Society of Clinical Oncology* 1984;**25**:229.
14 Klatesky J, Longeval E, Nicaise C, *et al.* Etoposide and cis-platinum in non-small cell bronchogenic carcinoma. *Cancer Treat Rep* 1982;**9**:133-8.
15 Ostelind K, Harbor S, Dombenowsky P, *et al.* Vindesine in the treatment of squamous cell carcinoma, adenocarcinoma, and large cell carcinoma of the lung. *Cancer Treat Rep* 1982;**66**:305-9.
16 Bakowski MT, Grouch JC. Chemotherapy of non-small cell lung cancer: a reappraisal and a look to the future. *Cancer Treat Rev* 1983;**10**:159-72.
17 Woods RL, Levi JA, Page J, *et al.* Non small cell cancer: a randomised comparison of chemotherapy with no chemotherapy. *Proceedings of the American Society of Clinical Oncology* 1985;**4**:177.
18 Killen JY, Holyoke ED, Mittelman A, *et al.* Adjuvant therapy of adenocarcinoma of the colon following clinically curative resection: an interim report from the gastrointestinal tumour study group (GITSG). In: Salmon SE, Jones SE, eds. *Adjuvant therapy of cancer III*. New York: Grune and Stratton, 1981:527-38.
19 Gastrointestinal Tumour Study Group: Prolongation of the disease-free interval in surgically treated rectal carcinoma. *N Engl J Med* 1985;**312**:1465-72.
20 Lavin P, Mittelman A, Douglass H, *et al.* Survival and response to chemotherapy for advanced colorectal adenocarcinoma: an eastern co-operative oncology group report. *Cancer* 1980;**46**: 1536-43.
21 Kemeny N, Yagoda A, Golbey R. A prospective randomised study of methyl—CCNU, 5-fluorouracil and vincristine (MOF) vs MOF plus streptozotocin in patients with metastatic colorectal carcinoma. *Proceedings of the American Society of Clinical Oncology* 1980;**21**:417.
22 Smith FP, Ellenberg S, Mayer R, *et al.* A phase II study of MOF—streptozotocin in advanced colorectal cancer: a GITSG trial. *J Clin Oncol* (in press).
23 Taylor I. A critical review of the treatment of colorectal liver metastases. *Clin Oncol* 1982;**8**: 149-58.
24 Kragbill WA. Treatment of liver metastases from colon cancer. *Mo Med* 1981;**78**:743-50.
25 Ansfield FJ, Ramirez G, Davis E, *et al.* Further clinical studies with intra-hepatic arterial infusion with 5 fluorouracil. *Cancer* 1975;**36**:2413-7.
26 Cady B, Oberfield R. Regional infusion chemotherapy of hepatic metastases from carcinoma of the colon. *Am J Surg* 1974;**127**:220-7.
27 Grage TB, Vassilopoulos PP, Singleton WW, *et al.* Results of a prospective randomised study of hepatic artery infusion with 5-fluorouracil versus intravenous 5-fluorouracil in patients with hepatic metastases from colorectal cancer: a central oncology group study. *Surgery* 1979;**86**: 550-5.
28 Brinkley D, Haybittle JL. The curability of breast cancer. *Lancet* 1975;ii:95-7.
29 Schabel FM. Rationale for adjuvant chemotherapy. *Cancer* 1977;**39**:2875-82.
30 Rossi A, Bonodomma G, Valagussa P, *et al.* Multimodal treatment in operable breast cancer: five year results of the CMF programme. *Br Med J* 1981;**282**:1427-31.
31 Trask C, Souhami R. Multimodal treatment in operable breast cancer. *Br Med J* 1982;**285**:1571-2.
32 Anonymous. Treatment of early breast cancer. *Lancet* 1984;ii:1193-4.
33 Coburn J, Akmann FR, Moon T, *et al.* The effect of prior adjuvant chemotherapy on survival in metastatic breast cancer. *Breast Cancer Res Treat* 1983;**3**:303-8.
34 Palmer BV, Walsh GA, McKinna JA, Greening WP. Adjuvant chemotherapy for breast cancer: side effects and quality of life. *Br Med J* 1980;**281**:1594-7.
35 Carbone PP, Bauer M, Band P, *et al.* Chemotherapy of disseminated breast cancer. *Cancer* 1977;**39**:2916-22.
36 Powles TJ, Smith IE, Ford HT, *et al.* Failure of chemotherapy to prolong survival in a group of patients with metastatic breast cancer. *Lancet* 1980;i:580-2.
37 Paterson AHG, Szafron O, Cornish R, *et al.* Effect of chemotherapy on survival in metastatic breast cancer. *Breast Cancer Res Treat* 1981;**1**:357-63.
38 Mattsson W, Borgstrom S, Landberg T. A weekly schedule of low-dose doxorubicin in treatment of advanced breast cancer. *Clin Ther* 1982;5:193-8.
39 Cornbleet MA, Stuart-Harris RC, Smith IE, *et al.* Mitozantrone for the treatment of advanced breast cancer: single-agent therapy in previously untreated patients. *Eur J Cancer Clin Oncol* 1984;**20**:1141-6.
40 Schmidt JD. Chemotherapy of hormone-resistant stage D prostatic cancer. *J Urol* 1980;**123**: 797-805.
41 Torti FM, Carter SK. The chemotherapy of prostatic adenocarcinoma. *Ann Intern Med* 1980;**92**:681-9.
42 Torti FM, Shortliffe LD, Carter SK, *et al.* A randomised study of doxorubicin versus doxorubicin plus cisplatin in endocrine—unresponsive prostatic carcinoma. *Cancer* 1985;**56**:2580-6.
43 Tannock IF. Is there evidence that chemotherapy is of benefit to patients with carcinoma of the prostate? *J Clin Oncol* 1985;**3**:1013-21.
44 Mead GM, Jacobs C. Changing role of chemotherapy in treatment of head and neck cancer. *Am J Med* 1982;**73**:582-92.
45 Rooney M, Stanley R, Weaver A, *et al.* Superior results in complete response rate and overall survival in patients with advanced head and neck cancer treated with 3 courses of 120 hour 5-Fu infusion cisplatinum. *Proceeding of the American Society of Clinical Oncology* 1983;**2**:159.
46 Bosh GJ. Adjuvant chemotherapy in the management of stage III and IV tumours of the head and neck. *CA* 1983;**33**:139-44.
47 Taylor SA, Applebaum E, Showel JL, *et al.* A randomised trial of adjuvant chemotherapy in head and neck cancer. *J Clin Oncol* 1985;**3**:672-9.
48 Schuller DE, Wilson H, Hodgson S, *et al.* Preoperative reductive chemotherapy for stage III and IV operable epidermoid carcinoma of the oral cavity, oropharynx, hypopharynx or larynx, phase III, Southurst oncology group study. In: Vidockle HR, ed. *Proceedings of the international conference on head and neck cancer*. Baltimore: Lancaster, 1984:48.
49 Stell PM, Dalby JE, Strickland P, *et al.* Sequential chemotherapy and radiotherapy in advanced head and neck cancer. *Clin Radiol* 1983;**34**:463-7.
50 Slotman GJ, Mohit T, Raina S, *et al.* The incidence of metastases after multimodal therapy for cancer of the head and neck. *Cancer* 1984;**54**:2009-14.
51 Fazekas JH, Gommer C, Kramer S. Adjuvant intravenous methotrexate or definitive radiotherapy alone for advanced squamous cancer of the oral cavity, oropharynx, supraglottic larynx, or hypopharynx. *Int J Radiat Biol Phys* 1980;**6**:533-41.
52 De Conti RC, Schoenfeld D. A randomised prospective comparison of intermittent methotrexate, methotrexate and leucovorin, and methotrexate combination in head and neck cancer. *Cancer* 1981;**48**:1061-72.
53 Yagoda A. Chemotherapy for advanced urothelial cancer. *Semin Urol* 1983;**1**:60-72.
54 Yagoda A. Chemotherapy of metastatic bladder cancer. *Cancer* 1980;**45**:1879-88.
55 Ritchie JP, Shipley WU, Yagoda A. Cancer of the bladder. In: DeVita VT, Hellman S, Rosenberg SA, eds. *Cancer. Principles and practice of oncology*. 2nd ed. Philadelphia: J B Lippincott, 1985:924-6.
56 Sternberg CN, Yagoda A, Scher HI, *et al.* Preliminary results of M-VAC (methotrexate, vinblastine, doxorubicin and cisplatin) for transitional cell carcinoma of the urothelium. *J Urol* 1985;**133**:403-8.
57 Raghaven D, Pearson B, Duval P, *et al.* Initial intravenous cis-platinum therapy: improved management for invasive high risk bladder cancer? *J Urol* 1985;**133**:399-402.
58 Herr JW, Yagoda A, Batata M, *et al.* Planned preoperative cisplatin and radiation therapy for locally advanced bladder cancer. *Cancer* 1983;**52**:2205-8.
59 Baker LH. Cisplatin in treatment of cervical and endometrial cancer patients. In: Prestayko AW, Crooke ST, Carter SK, eds. *Cisplatin: current status and new developments*. New York: Academic Press, 1980:403-9.
60 Seltzer V, Vogl SE, Kaplan BH. Doxorubicin and cis-diammine dichloroplatinum in the treatment of metastatic endometrial adenocarcinoma. *Gynecol Oncol* 1984;**19**:308-13.
61 Pasmantier MW, Coleman M, Silver RT, *et al.* Treatment of advanced endometrial carcinoma with doxorubicin and cisplatin: effects on both untreated and previously treated patients. *Cancer Treat Rep* 1985;**69**:539-42.
62 Bukowski RM, Balcerzak SP, O'Bryan RM, *et al.* Randomised trial of 5-fluorouracil and mitomycin C with or without streptozotocin for advanced pancreatic cancer. *Cancer* 1983;**52**: 1577-82.
63 O'Connell MJ. Current status of chemotherapy for advanced pancreatic and gastric cancer. *J Clin Oncol* 1985;**3**:1032-9.
64 De Vita VT, Henney JE, Hubbard SM. Estimation of the numerical and economic impact of chemotherapy in the treatment of cancer. In: Burchenal JH, Oettgen HF, eds. *Cancer achievements, challenges and prospects for the 1980s*. Vol 2. New York: Grune and Stratton, 1980:859-78.
65 Boffey PM. Cancer progress. Are the statistics telling the truth? *Med J Aust* 1984;**2**:743-5.
66 Gough IR, Furnival CM, Schilder L, *et al.* Assessment of the quality of life of patients with advanced cancer. *Eur J Cancer Clin Oncol* 1983;**19**:1161-5.
67 Chabner BA, Fine RL, Allegra CJ. Cancer chemotherapy: progress and expectations, 1984. *Cancer* 1984;**54**:2599-609.
68 Ilbery PLT. Cost of health care services in the treatment of cancer. *Aust Fam Physician* 1978;7:1062-74.
69 Milsted RAV, Fox RM, Tattersall MHN, Woods RL. Cancer chemotherapy—what have we achieved? *Lancet* 1980;i:1343-6.
70 Tattersall MH. Cancer management in the '80s. *Med J Aust* 1981;**2**:10-5,41.

(Accepted 8 July 1986)

Is the natural history of Clostridium tetani such that protective levels of immunity might be maintained in those—for example, gardeners and builders—who by the nature of their work are continually suffering minor lacerations. How ubiquitous is the organism in its active and latent forms? Is there any good evidence that active immunisation should be at five rather than 10 year intervals?

Tetanus is due to the production of toxin by *Clostridium tetani* under the anaerobic conditions present in wounds. Even those who have recovered from tetanus do not gain reliable immunity and active immunisation is therefore essential *especially* for those continually suffering minor lacerations that may be contaminated. The organism is widespread in soil contaminated with animal excreta (including wild animals) making, for example, football pitches a source of infection as well as domestic gardens and fields grazed by farm animals. A full basic course of adsorbed vaccine (three "primary" doses in infancy followed by a preschool and teenage booster) induces durable immunity. Following this, in Britain, it is currently recommended that further reinforcing boosters should be given after injuries but not normally more frequently than every five years, unless the wound is particularly dirty, deep, or likely to have been contaminated. Whether routine reinforcing doses are needed for adults in other circumstances is debatable but many cases of tetanus occur without a history of preceding injury. It would seem reasonable therefore that especially those with occupational or other increased risks of infection should receive boosters at around 10 year intervals. The precise timing of boosters required to maintain protective antitoxin levels is likely to vary with individuals and it is better to be "safe than sorry."—ERIC WALKER, lecturer in infectious diseases, Glasgow.

Joint Committee on Vaccination and Immunisation. *Immunisation against infectious disease*. London: DHSS, 1984:47-9.

Correction

Use and misuse of a digoxin assay service

We regret that an error occurred in this article by Dr Ian Gibb and others (13 September, p 678). In the abstract it was stated that "Treatment in 64 patients (22%) was changed either while awaiting the assay result or after receiving it. . . ." This should have read "Treatment in 64 patients (22%) was changed after the assay result was received."