$300 billion will be spent in direct medical costs in these six countries to treat smoking-related diseases over 20 years.

CONCLUSION: The model predictions are consistent with previously published sources and the results demonstrate the importance of smoking cessation efforts to prevent deaths from smoking within Europe.

IR7

A SYSTEMATIC REVIEW OF SYSTEMIC AND TOPICAL ANTIMICROBIAL AGENTS USED IN THE PREVENTION AND TREATMENT OF CHRONIC WOUNDS

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OBJECTIVE: To determine the effectiveness and cost-effectiveness of antimicrobial agents in the management of chronic wounds.
METHODS: A systematic review of the literature was undertaken. Eighteen electronic databases, relevant journals, conference proceedings and bibliographies of retrieved papers were searched, and an expert panel was consulted. Randomised and non-randomized trials, with patients, limbs, or lesions as the units of allocation were selected. People with diabetic foot ulcers, pressure ulcers, leg ulcers, pilonidal sinus, non-healing surgical wounds, chronic cavity wounds, and those at risk of developing pressure ulcers were included. Any systemic or topical agents with antimicrobial properties were considered. The primary outcome was wound healing (incidence of new lesions for prevention studies) assessed with an objective measurement. All included studies were assessed against a comprehensive checklist for methodological quality. A narrative (qualitative) overview was conducted, with results grouped according to wound type. It was not possible to combine results by meta-analysis due to lack of similarity across the studies.
RESULTS: Twenty-seven trials were included, 23 of randomized design. There were 9 evaluations of systemic antimicrobials and 18 of topical agents. Several methodological problems were detected, the most common being inadequate sample size. Results do not support the routine use of systemic antibiotics for leg ulcers (various etiologies) or diabetic foot ulcers without acute infection, however they may be useful as an adjunct to surgery for pilonidal sinus. Several topical preparations may be helpful, including dimethyl sulfoxide, silver sulphadiazine, benzoyl peroxide, oxyquinoline, and gentamicin. Hydrogels, hydrocolloids, and silastic foam dressings appear to produce equivalence in terms of clinical effectiveness versus antimicrobial agents, and may be associated with cost savings.
CONCLUSIONS: Most of this research requires replication in larger, well-designed studies to establish both clinical and cost-effectiveness.

IR8

COST-EFFECTIVENESS OF COMBINED HEPATITIS A AND B VACCINATION AND HEPATITIS B MONOVACCINATION IN SWITZERLAND AND AUSTRIA

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OBJECTIVE: To analyze the cost-effectiveness of combined hepatitis A and B vaccination (Vacc A+B) and hepatitis B monovaccination (Vacc B) in children and adolescents.
METHODS: A decision tree combined with a Markov-model was used to predict clinical and economic outcomes for three different age groups: 0–15, 1–15, and 11–15 years. The model was designed to follow an initially vaccinated age group over 30 years. The analysis took the perspective of society, i.e., direct and indirect costs were considered. Costs were discounted at 5% per year. Primary outcomes measure was the incremental cost per avoided infection of each vaccination strategy compared to no vaccination.
RESULTS: The analysis indicated that for both Switzerland and Austria, Vacc A+B is more cost-effective than Vacc B in all three compared age groups. The incremental cost-effectiveness ratios of the Vacc A+B strategy for Switzerland ranged from CHF 11,070 to 12,210 (Austria ATS 61,260 to 70,270) versus CHF 24,630 to 26,520 (Austria ATS 141,750 to 159,140) for Vacc B depending on the age group. For both vaccination strategies, the most favorable cost-effectiveness ratio was obtained when vaccinating 11–15 year olds. The superior cost-effectiveness of the Vacc A+B strategy is due to a reduction in hepatitis A coupled with a modest increase in vaccination costs. In view of evidence suggesting that hepatitis A and B cases are more frequent than officially reported, these results are likely to be conservative.
CONCLUSIONS: Prevention of both hepatitis A and B as compared to hepatitis B alone is cost-effective in Switzerland and Austria. When taking into consideration the low incidence of hepatitis A in both countries, combined hepatitis A and B vaccination is likely to have even greater impact in countries with a higher incidence of hepatitis A infection.

ECONOMIC & OUTCOMES STUDY RESULTS OF CANCER

CA1

PROSPECTIVE ECONOMIC EVALUATION OF ANTIBIOTIC PROPHYLAXIS IN SMALL CELL LUNG CANCER (SCLC) PATIENTS RECEIVING CHEMOTHERAPY

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OBJECTIVE: To determine whether the incidence of febrile leucopenia (FL) is reduced in SCLC patients by administering prophylactic antibiotics thereby reducing resource use and costs associated with treatment.

METHODS: A cost-effectiveness analysis was conducted alongside a multicenter phase III randomized controlled trial with a 2×2 factorial design. The trial was designed to compare standard dose CDE (cyclophosphamide, doxorubicin and etoposide) versus intensified CDE (125% dose with G-CSF), with or without prophylactic antibiotics. Patients in the verum arm received roxithromycin 150 mg and ciprofloxacin 750 mg, both given twice daily for 10 days, commencing the day after completing each cycle of chemotherapy. The economic evaluation examines the costs and effects of patients taking antibiotics versus placebo. Results are presented for 33 patients in The Netherlands, representing 20.5% of the total sample (n = 161). Resource utilization data were collected during the trial and included hospitalizations, concomitant medications, transfusions and medical procedures. The viewpoint of the health insurance system is taken, using 1998 prices expressed in Dutch guilders (ppp of 2.07NLG/US$). The effectiveness measures include the incidence of febrile leucopenia and the number of infectious deaths.

RESULTS: The average cost attributed to patients in the placebo arm was 12,898 NLG compared to 6,999 NLG in the verum arm, yielding a difference of 5,899 NLG (US$ 2850) (95% CI $(-)$ 2081 $-$ 13,897) in favor of administering prophylactic antibiotics. The clinical trial (n = 161) demonstrated a 50% decrease in the incidence of FL and an absolute reduction in the risk of infectious death from 6% to 0% in patients taking antibiotics.

CONCLUSION: The use of prophylactic antibiotics in small cell lung cancer patients is cost-effective as it reduces the incidence of FL and infectious deaths whilst reducing direct medical costs by 45%. This study was partly sponsored by Bayer BV.

CA2

COST COMPARISONS BETWEEN HOSPITALS IN DIFFERENT COUNTRIES BY MEANS OF A RESOURCE USE INDEX

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OBJECTIVES: To compare the direct costs of managing patients with advanced colorectal cancer in five European countries by means of a resource use index, which avoids the confounding caused by differences in absolute and relative prices.

METHODS: In 10 hospitals in five countries, data on patient management and resource use were collected from the hospital charts of 20 consecutive, newly diagnosed patients. All available data on resource use for each patient from diagnosis until death or last seen alive were included in the investigation. For only one country, Belgium, was it possible to find a complete set of consistent unit prices, namely the tariffs according to which the providers are re-

munerated by the health insurance system. By using these unit prices to value the use of resources in all countries, an index for average total resource use per hospital has been constructed, which reflects only differences in *real* resource utilization. The average across all the hospitals has been set equal to 100, so index values represent deviations from this average.

RESULTS: The estimated index values for average total resource use vary from 75 to 131. Differences between the two hospitals in each country are just as big as those between hospitals in different countries. When subdividing the patients into four types according to site and stage of disease, the spread between the hospitals becomes even wider. No hospital is consistently above or below the average resource use for all patient categories.

CONCLUSIONS: Superficial comparisons of the costs of treating specific diseases in different countries will unavoidably be confounded by differences in prices. By using a single set of unit prices for weighting the use of resources, an index reflecting only real differences in resource use may be determined and used for initial, aggregate comparisons exploring the need for further analysis.

CA3

ESTIMATING SURVIVAL GAIN FOR COST-EFFECTIVENESS ANALYSIS: THE EXAMPLE OF EARLY HORMONAL TREATMENT IN LOCALLY ADVANCED PROSTATE CANCER

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OBJECTIVES: To examine the impact of various methods of estimating survival gain from censored survival data on the results of a cost-effectiveness analysis.

METHODS: A cost-effectiveness analysis of the addition to radiotherapy of early hormonal therapy with a LHRH analogue (goserelin) in patients with locally advanced prostate cancer has been carried out. The clinical results derive from a randomized controlled trial (EORTC 22863, reported by Bolla et al. [1]), and resource utilization data were collected retrospectively in one French hospital recruiting 90/415 patients in the trial. Costs are calculated from the viewpoint of the French health insurance system. To estimate average survival, various methods are available and will be compared, notably a restricted means analysis truncated at a median follow-up of 45 months and extrapolations based on fitting a parametric model (e.g., Weibull or exponential) to the survival curves.

RESULTS: The clinical trial documented an overall survival rate at 5 years of 79% in the group receiving radiotherapy plus hormonal therapy compared to 61% (p = 0.001) in those receiving only radiotherapy. The average costs in the two groups were 81,700 FF and 69,900 FF respectively. The survival improvement is thus associated with an increase of 11,800 FF in average cost, but to determine the incremental cost-effectiveness ratio (ICER) the exact gain in average survival must be known. The re-