

VIA FAX 617-332-8013

April 30, 2003

Ms. Carlotta Patten
Brown, Rudnick, Berlack & Israels
1 Financial Center
Boston, MA 02111

Re: Marcia Rhodes

Dear Ms. Patten:

Pursuant to your request, I have conducted an analysis of our database to develop an estimate of life expectancy for Ms. Marcia Rhodes. My analysis is based on the actual survival experiences of over 36,000 persons with follow-up through 2002. All patients were treated at a model spinal cord injury hospital or a Shriners Hospital in the United States. All persons treated at these facilities and reported to the National Spinal Cord Injury Statistical Center were included in this analysis.

The statistical technique that I used was a logistic regression analysis in which each year of follow-up for each person was treated as a separate observation. As a result, the analysis was based on 5,960 deaths occurring in 358,589 person-years of follow-up. The logistic regression model was designed to estimate the probability of dying each year for each person based on current age and time post-injury (both increasing with the passage of time), race, sex, cause of injury, neurologic level and completeness of injury, ventilator status, and calendar year (to reflect the trend toward increasing survival probabilities that exist today relative to the 1970s and 1980s).

Specifically, the model revealed that the odds of dying each year were 99% higher for persons with C1-C4 injuries than persons with paraplegia, and 80% higher for persons with ASIA A injuries than persons with ASIA D injuries. The model also revealed that since 2000, the odds of dying each year were 29% lower than during the 1970s, and that the odds of dying each year after the 29th-post-injury year were 24% higher than during the third through 29th year after injury. The odds of dying increased substantially with advancing age. Men had 27% higher odds of dying than women, and ventilator-dependent persons had 89% higher odds of dying than persons who were not ventilator-dependent.

After developing the model, I then applied it to the case of Ms. Rhodes. Specifically, Ms. Rhodes' characteristics are that she has a T-12 injury level that is neurologically complete (ASIA Grade A), that she is currently 47 years old, white, injured in a motor vehicle accident, not ventilator-dependent, and that she has already survived more than 1 year post-injury. I also assumed that the mortality rate for spinal cord injured persons observed since 2000 would continue into the future without either a further decrease or an increase.

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Applying the model to Ms. Rhodes' characteristics yielded the attached table of survival probabilities for each successive year from today. For example, Ms. Rhodes is estimated from this model to have a 98.49% chance to live at least one more year, a 97.48% chance to live at least two more years, etc. Future life expectancy is calculated as the summation of this table of survival probabilities. Based on this table, Ms. Rhodes' life expectancy would be 24.4 years from today. The normal life expectancy for a 47-year-old white female in the absence of spinal cord injury would be 34.7 years. Therefore, the injury has reduced Ms. Rhodes' current life expectancy by 10.3 years, or 29.7%. The table also shows that the median (50%) survival time for Ms. Rhodes is estimated to occur at 26.0 years, a figure that is slightly higher than the life expectancy.

If you have any questions or if I can be of additional assistance, please let me know. I can be reached by email at devivo@uab.edu, fax at 205-934-2709, or phone at 205-934-3320.

Cordially,



Michael J. DeVivo, Dr.P.H.
Professor and Director
National Spinal Cord Injury Statistical Center