

**Characteristics of cardiac arrest in cancer patients as a predictor of survival after cardio-pulmonary resuscitation.**

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**Abstract:**

**Background:** Despite advances in cardiopulmonary resuscitation and the education of its providers, survival remains dismal for cancer patients suffering in-hospital cardiac arrest. In an effort to determine if characteristics of cardiac arrest would represent a useful parameter for prognostication and recommendations regarding the suitability of ongoing resuscitation for various groups, this review was undertaken for patients who experienced in-hospital cardiac arrest.

**Methods:** A retrospective study of data gathered between January 1993 and December 1997 was undertaken in a 518-bed comprehensive cancer center. The records of 243 inpatients who had experienced cardiac arrest and received cardiopulmonary resuscitation were reviewed, and their course observed until hospital discharge or death.

**Results:** Sixteen of 73 patients (22%) who had sudden, unanticipated cardiac arrests survived to be discharged from the hospital; however, none (0 of 171) of the patients who experienced an anticipated cardiac arrest survived ( $P < 0.001$ ). Logistic regression analysis revealed that anticipated cardiac arrest associated with metabolic derangement was an independent predictor of hospital mortality.

**Conclusions:** Patients experiencing an anticipated cardiac arrest, the course of which could not be interrupted through aggressive management in an intensive care unit, have an extremely poor prognosis. Ongoing resuscitative measures in these patients need not be routinely provided. The authors suggest an algorithm for resuscitation that evaluates the characteristics of the arrest as a prognostic factor. This algorithm should be implemented once progressive deterioration spirals toward cardiac arrest that cannot be prevented. Such an approach should avoid painful and costly interventions that are futile with the present techniques of cardiopulmonary resuscitation.

**Comments**

**Strengths/Uniqueness** This article sheds more light on a highly controversial issue: resuscitation efforts in palliative patients. Although the authors forewarn about extrapolating the results of the study, this paper adds to the body of knowledge of the Palliative Care specialty.

Resuscitation efforts seem to be appropriate in some specific cases, and it is important to identify those situations where there might be a successful outcome. In our program a DNR order is a prerequisite for admission to the Tertiary Palliative Care Unit or the hospices, which sometimes leads to difficulties in patient care.

**Weaknesses:** There are concerns about the ethical grounds of performing CPR in a population of patients with clear contraindications based on prognosis and disease extent, although the characteristics of this population are not very well described and seem somewhat heterogeneous. In view of the unlikely reversibility of these severe situations, the aggressive treatment these patients received (i.e. admission to ICU) seems inappropriate, but this is probably related to differences in established goals of care and practices.

**Relevance to Palliative Care:** Identification of subgroups of patients who might benefit from CPR for unexpected cardiac arrest has major implications in the care provided to the palliative care population, and might challenge current policies in our system.