

DEATH DETERMINATION BY CIRCULATORY CRITERIA (DCC)

Unique identifier number: _____

Cause of death: _____

Site: _____

Start time of the 5 min observation period: _____ : _____
hh:mm

| DEATH DETERMINATION BY CIRCULATORY CRITERIA (DCC) | | |
|--|-----------------------------------|--------------------------------|
| Date and time of death (end of the 5 min observation period): | _____ : _____ YYYY-MM-DD hh:mm | |
| | 1st Declaring physician | 2nd Declaring clinician |
| Clinician's name (print): | _____ | _____ |
| Permit number: | _____ | _____ |
| Signature: | _____ | _____ |

Physicians declaring death

- Physicians declaring death by circulatory criteria must hold a full and current licensure for independent medical practice in the province of Quebec. **The second clinician** participating in death determination may be a physician in training (residents, fellows).
- Physicians must have the requisite skills, training, and knowledge of death determination processes and procedures, including the ability to interpret monitoring devices being used.
- In the case of a DCC for organ donation, both physicians determining death must be independent of retrieval or transplantation teams.

Monitoring devices for death determination by circulatory criteria*

- The use of an indwelling arterial catheter is recommended to confirm permanent cessation of circulation.
 - An arterial pulse pressure ≤ 5 mm Hg and within the error of measurement of clinical monitoring equipment is recommended to confirm permanent cessation of circulation for patients with an indwelling arterial catheter.
- When the use of an indwelling arterial catheter is not possible, the use of continuous electrocardiogram (ECG) monitoring is recommended. The isoelectric ECG confirms the permanent cessation of circulation.

* An alternative method of declaring death could be used after approval from the Organ Donation Medical Director of Transplant Québec.

Death determination by circulatory criteria

DCC determination is made based on the absence of extracranial circulation that leads to the permanent absence of intracranial (brain) circulation.

- From the onset of cessation of circulation, the two (2) physicians must observe the potential donor and the monitoring device for a continuous period of five (5) minutes to confirm the absence of:
 - blood pressure if an indwelling arterial catheter is used or;
 - cardiac electrical activity if an ECG is used.
- The five (5) minute observation period must be restarted if any signs of returning circulation (autoresuscitation) are observed during this time.
- Death declaration must be performed by two (2) physicians at the end of this five (5) minute period.
- There must be no interventions to facilitate organ donation of interfering with continuous observation of the potential donor during the observation period ("no-touch" period).

Ref.: Shemie, S. D., Wilson, L. C., Hornby, L., Basmaji, J., Baker, A. J., Bensimon, C. M., Chandler, J. A., Chassé, M., Dawson, R., Dhanani, S., Mooney, O. T., Sarti, A. J., Simpson, C., Teitelbaum, J., Torrance, S., Boyd, J. G., Brennan, J., Brewster, H., Carignan, R., et al. (2023). A brain-based definition of death and criteria for its determination after arrest of circulation or neurologic function in Canada: a 2023 clinical practice guideline. *Canadian Journal of Anaesthesia = Journal Canadien d'Anesthésie*, 70(4), 483–557. <https://doi.org/10.1007/s12630-023-02431-4>