

Critical limb ischemia may not increase mortality risk in patients with diabetes



Diabetic patients with critical limb ischemia (CLI) who are assessed quickly and treated aggressively do not have an increased risk of long-term cardiac mortality, according to a study in *Diabetes Care*.

“Impact of critical limb ischemia on long-term cardiac mortality in diabetic patients undergoing percutaneous coronary revascularization” studied 764 patients, of whom 14% developed CLI and underwent revascularization, with 96% procedural success. The risk of cardiac mortality after 4 years did not increase.

Previously it had been reported that CLI is an independent risk factor for cardiac mortality in patients with diabetes.

Radiation therapy, dissection, and lymphedema in positive-node breast cancer

A study presented at the 2013 American Society of Clinical Oncology Annual Meeting found that in women with a positive sentinel node biopsy for breast cancer, axillary radiation therapy and axillary lymph node dissection provide similar outcomes, but radiation therapy reduces the risk of both short- and long-term lymphedema compared to dissection.



“Radiotherapy or surgery of the axilla after a positive sentinel node in breast cancer patients: Final analysis of the EORTC AMAROS trial” reports that with a median follow-up of about 6 years, there were no significant differences in overall survival between the two groups.

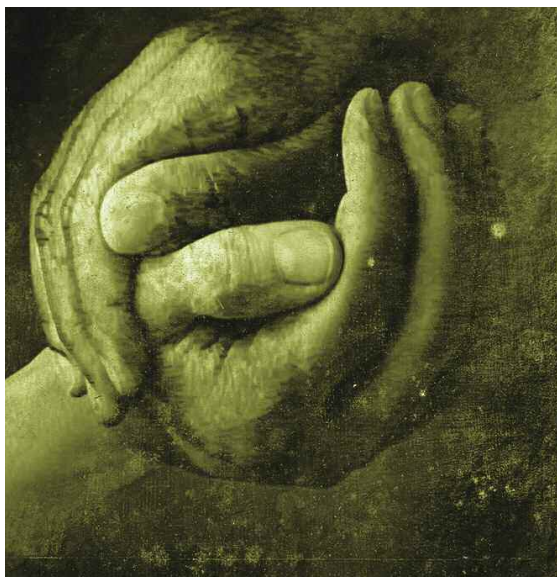
However, dissection nearly doubled the risk of lymphedema compared to radiation: 40% compared to 22% at year 1, and 28% compared to 14% at year 5. The women in AMAROS will continue to be followed for 10 to 15 years.

Multi-layered soft silicone foam dressings prevent pressure ulcers in ICU patients

“A randomised controlled trial of the effectiveness of soft silicone multi-layered foam dressings in the prevention of sacral and heel pressure ulcers in trauma and critically ill patients: the border trial,” published by the *International Wound Journal*, concludes that when applied in the emergency department (ED) before transfer to the intensive care unit (ICU), the dressings prevent pressure ulcers.

Of the 440 patients in the study, an intervention group of 219 patients had Mepilex Border Sacrum and Mepilex Heel dressings applied in the ED and kept on throughout their stay in the ICU. Significantly fewer of those in the intervention group had pressure ulcers, compared to the control group.

Older adults with diabetes benefit from behavioral interventions



A study in *Diabetes Care* reports that adults aged 60 to 75 who have diabetes benefit just as much as younger adults from participating in self-management activities.

“Do older adults aged 60–75 years benefit from diabetes behavioral interventions?” compared 71 adults in the community with an average age of 67 with 151 younger adults with an average age of 47. The two groups were randomized to attend a structured behavior group, an attention control group, or individual education. The researchers measured glycated hemoglobin, self-care indicators (such as blood glucose checks), and psychosocial factors (such as quality of life) at baseline and at 3, 6, and 12 months after the intervention.

Older adults participating in self-management activities received glycemic benefit equal to those of younger adults, and older adults had the greatest glycemic improvement in the two group conditions.



Fruit flies reveal clues to wound healing in humans

A person’s skin and a fruit fly’s exoskeleton, called a “cuticle,” both protect against injury. This similarity in function led researchers to use the model of what they call the “biological armor” of the fly to analyze skin repair at a cellular and molecular level.

A **presentation given at the 2013 Genetics Society of America’s 54th Annual Drosophila Research Conference** outlined the technique the researchers used to study how different molecular signals bind to receptors on the cells that line a wound, influencing the cell division, growth, and migration that result in healing.

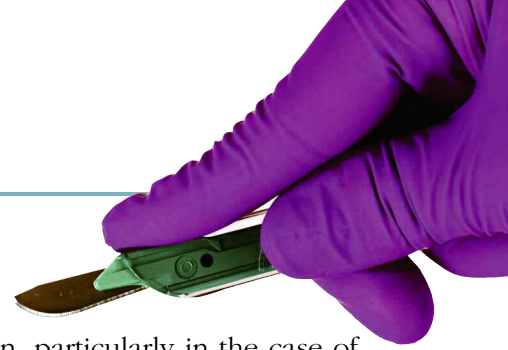
An important part of the technique is to inject trypsin, which helps to pinpoint how genes turn “on” and “off” after a wound injury occurs. The researchers discovered that the immune response begins as soon as the cuticle has been breached. They also identified eight new genes that are activated in cells near puncture wounds in the flies, so they now can explore if genes in humans play a similar role.

Ultimately, the work may help develop compounds that promote healing and help identify treatments for chronic skin diseases, such as psoriasis and eczema.

Study evaluates wound assessment tools



A study that evaluated the usefulness of



wound assessment tools for nurses recommends two—the Applied Wound Management tool and the National Wound Assessment Form.

The authors of “**Wound assessment tools and nurses’ needs: an evaluation study**,” published by the *International Wound Journal*, conducted a literature search to determine the criteria for an optimal wound assessment tool. Next, they evaluated freely available wound assessment tools to determine how well they met the criteria.

Although no tool met all criteria, the two recommended tools came closest. Criteria for inclusion in the optimal wound assessment tool were:

- details and characteristics of the wound
- patient details
- wound measurement
- tissue type
- exudate
- surrounding skin
- pain
- signs of infection
- documentation
- communication and continuity of care
- ease of use
- setting of goals for healing and planning care
- monitoring of the healing process
- guiding practice.

The authors evaluated 14 assessment tools that, among other criteria, were developed in the last 15 years, used for adults, and written in English.

Wound infection, obesity increase risk of surgical dehiscence

An analysis of articles retrieved through three electronic databases found that the most common risk factors for surgical wound dehiscence (SWD) are obesity and

wound infection, particularly in the case of abdominal surgery.

The authors of “**Determining risk factors for surgical wound dehiscence: a literature review**,” published by the *International Wound Journal*, found that a clear definition of SWD and risk assessment tools are lacking.

Human scabs inspire wound-healing material



A membrane inspired by human scabs is showing promise as a means for speeding wound healing, according to “**Scab-inspired cytophilic membrane of anisotropic nanofibers for rapid wound healing**,” published in *Applied Materials and Interfaces*.

The researchers, who describe scabs as a perfect natural dressing material for wounds, set out to develop wound dressings that reduce the risk of infections while speeding wound healing. The resulting “cytophilic” wound dressing material attracts new cells needed for healing. The material mimics the underside of scabs, where tiny fibers are arranged in the same direction.

The researchers **conclude** the membrane made of polyurethane “is of great potential in fabricating dressing materials for rapid wound healing, as well as other biomaterials, such as membrane for capturing circulating tumor cells, bone growth and constructing neural networks.” ■