

# Treating Wounds Caused by Chemotherapy, Radiotherapy and GvHD Post-Bone-Marrow-Transplant in Hematologic Patients

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## BACKGROUNDS AND AIMS:

Hematologic patients, to receive an allogenic bone marrow transplant (BMT), need chemotherapy, and – as per agreed medical protocol – radiotherapy, resulting in a condition of aplasia. These treatments can cause skin rash that may evolve into wounds. Also, one of BMT complications is Graft versus Host Disease (GvHD) that involves various organs and apparatuses, in particular skin with spot and papule rash, desquamation, blisters similar to burns. Considering the evidence suggested by the literature of the results of Hyaluronic Acid (HA) based treatment on burns and the efficacy of an HA gel<sup>1</sup> – Jalosome soothing gel™ Welcare – in other wounds caused by radiotherapy (in patients treated for a solid tumor), we developed a care protocol combining the use of this gel with a non-adhering silicone dressing<sup>2</sup> – Cuticell Contact™ BSN Medical – to treat skin GvHD and chemo/radiotherapy wounds in hematologic patients.

## METHODS:

A convenient sample of 17 adult patients was recruited, all post BMT (February to December 2015) who developed acute GvHD. Their wounds were treated twice a day applying HA gel, after rinsing with sterile water, through a non-adhering silicone dressing changed once a week.

## RESULTS:

The patients treated with this care protocol showed a remarkable reduction of pain and an increase in skin regeneration visible within 6 to 15 days. Because of these encouraging results the care protocol was extended to patients before BMT, from the day before the first session of radiotherapy.

## CONCLUSIONS:

The efficacy of the experimental care protocol was such that the researchers applied for approval to the Ethics Committee of San Raffaele University Hospital and implemented the same care protocol as a preventive action plan. Further plans of research include the application of the treatment to patients with chronic GvHD.

### Bibliography:

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- Washburn NR, Prata JE, Friedrich EE, Ramadan MH, Elder AN, Sun LT. (2013) [Polymer-conjugated inhibitors of tumor necrosis factor-α for local control of inflammation.](#) *Biomater.*; 3 (3).
- Sun LT, Friedrich E, Heuslein JL, Pferdehirt RE, Dangelo NM, Natesan S, Christy RJ, Washburn NR. (2012) [Reduction of burn progression with topical delivery of \(antitumor necrosis factor-α\)-hyaluronic acid conjugates.](#) *Wound Repair Regen.*, 20 (4): 563-72.

### Trademarks and commercial names:

- <sup>1</sup> Jalosome soothing gel™ Welcare  
<sup>2</sup> Cuticell Contact™ BSN Medical



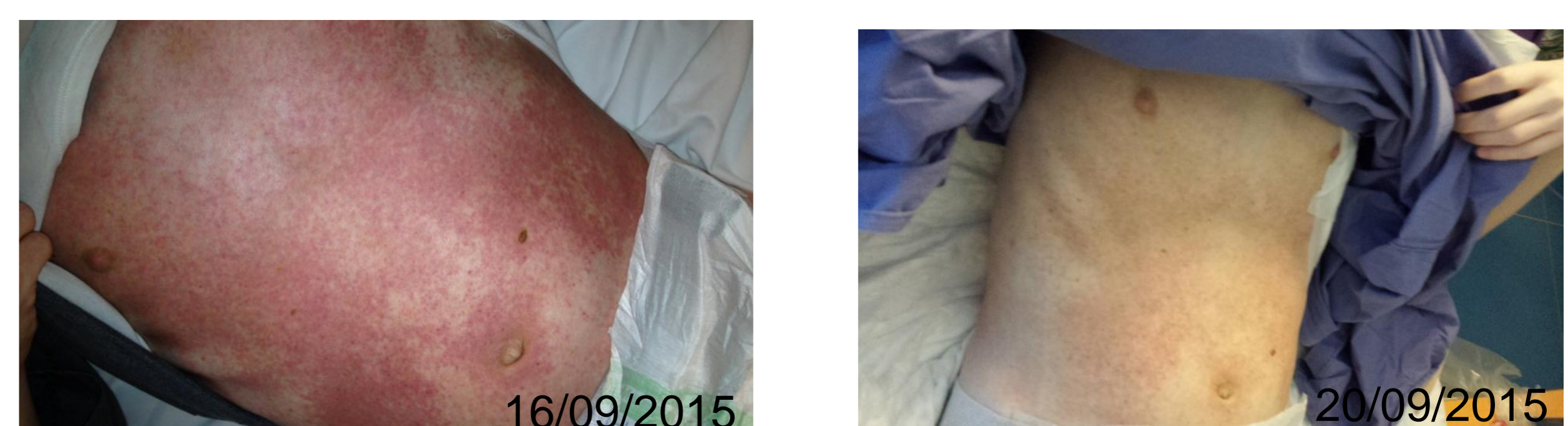
L.D.: a patient whose GvHD involved face, neck, armpits, chest, abdomen, back and groin. His face that was the more damaged part was completely cured in a month (photos show progress from 10/09/2015 to 21/10/2015).



C. P.: a patient whose GvHD involved lips, neck, armpits, chest, abdomen, back and genitals. Her skin got better in less than a month (photos show progress from 17/05/2015 to 12/06/2015).



F. D. G.: A patient whose GvHD involved neck, armpits, arms, chest, abdomen and back. Her skin was completely cured in 10 days (photos show progress from 06/02/2015 to 15/02/2015).



G. M.: A patient whose GvHD involved chest, abdomen and back. In less than a week he got better (photos show progress from 16/09/2015 to 20/09/2015).