



# Convex Solution for Ostomy Clinical Challenges

Chizu Sakai-Imoto, BSN RN CWOCN  
Cleveland Clinic, Cleveland, Ohio



# Disclosure

- Convatec Advisory Board

# Cleveland Clinic



# How do we select pouches for the patients?

## Stoma Assessment

- Mucosa color and condition
- Mucocutaneous junction
- Size and Shape
- Where the stoma opening is located
- Type of Stoma (loop type vs End type)

## Peristomal skin condition

- Will determine what type of wound care products and accessories may need to use to create the pouch landing space.



# How do we select pouches for the patients?

## Type of stoma and characteristic of output

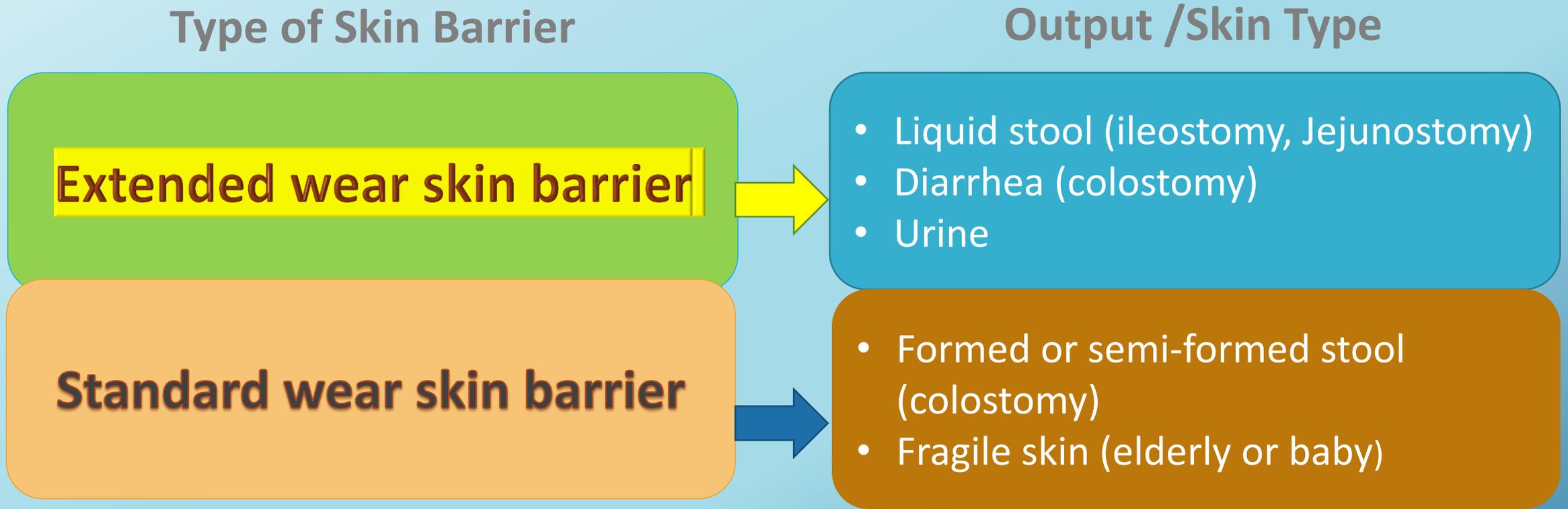
- Jejunostomy: Large amount of undigested food particle mixed effluent
  - May need Total parenteral nutrition (TPN)
- Ileostomy : Watery to thick oatmeal like consistency effluent
  - Prevent dehydration is very important
  - Output in 24 hours: 800-1200cc
- Colostomy : Soft to semi formed stool
- Urostomy : Urine

Select pouch closure type depends on the characteristic of output



# How do we select pouches for the patients?

## Characteristic of Output/Skin type



# How do we select pouches for the patient ?

## Characteristic of skin barrier shape

### FLAT

- Flat abdominal contour
- Stoma height is budded
- Firm supportive tissue
  - Post op
  - Pregnancy
  - Peristomal Hernia

### CONVEX

- Irregular abdominal contour: to fill in the crease around stoma
- Stoma height is flush or only budded slightly to create better seal
- Soft supportive tissue to provide stability



# How do we select pouches for the patients?

- Abdominal wall assessment
  - Abdominal Contour: Check in the different position
  - Shape of the abdomen
  - Creases: Check the depth
  - Abdominal support tissues



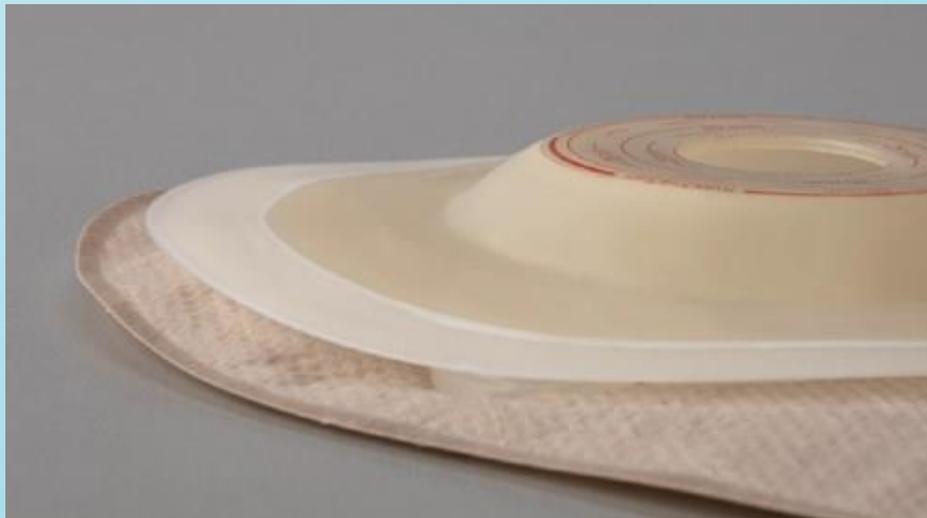
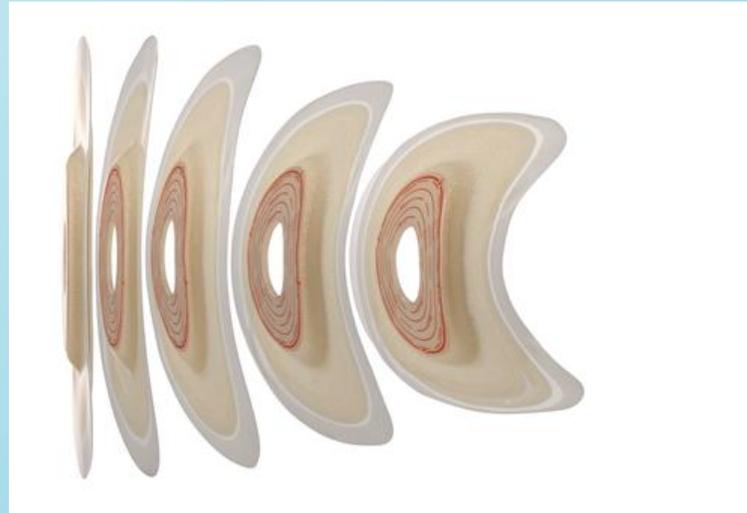
# What is Convexity?

- Convexity is the outward curving of the faceplate or skin barrier<sup>14</sup>.
- The wafer curves outward toward the skin



# Type of Convexity

- Soft vs Firm
- Light/Shallow
- Deep



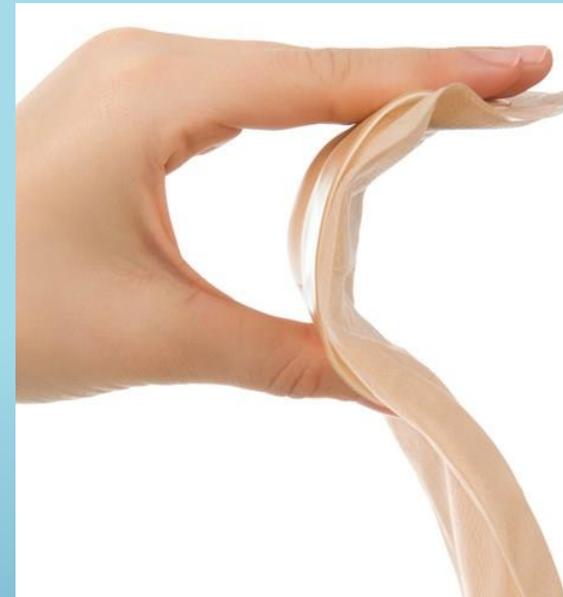
## FIRM/RIGID Convex options:

SurFit Natura Convex-it,  
SurFit Natura moldable convex  
Natura Accordion cut-to-fit convex

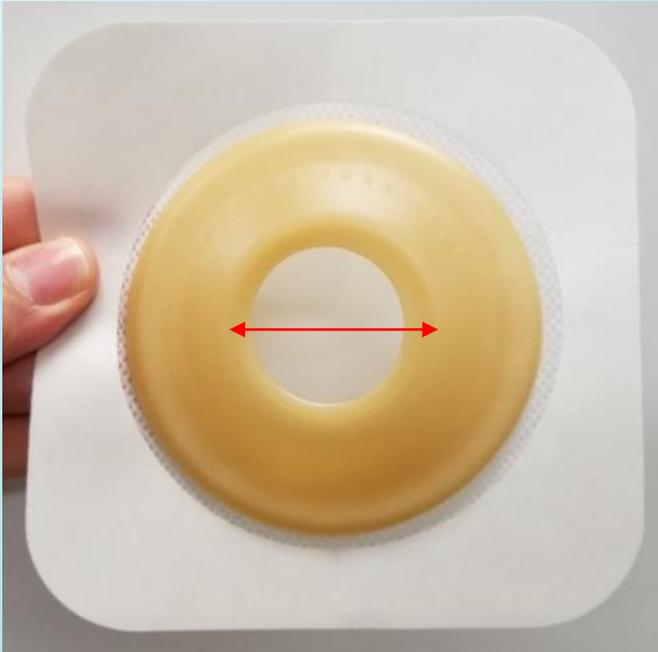


## SOFT/FLEXIBLE Convex options:

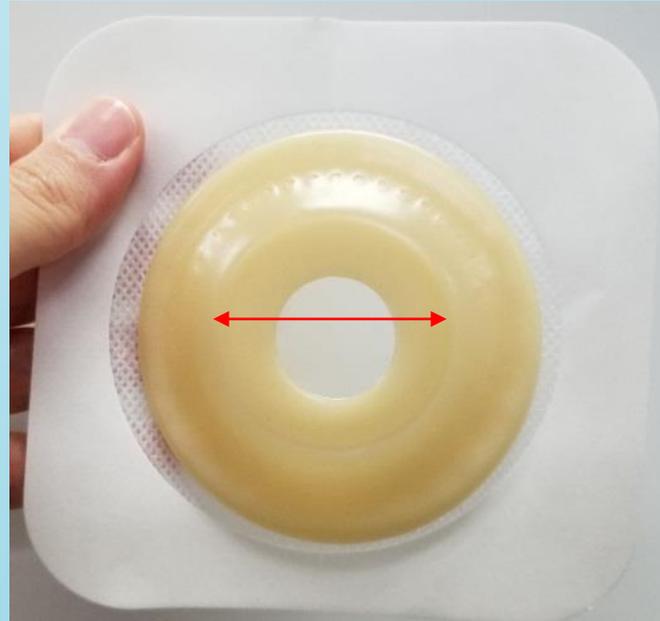
Esteem+SOFT (shallow-4mm and softer)  
Esteem+ FLEX (deep-7mm. and firmer)



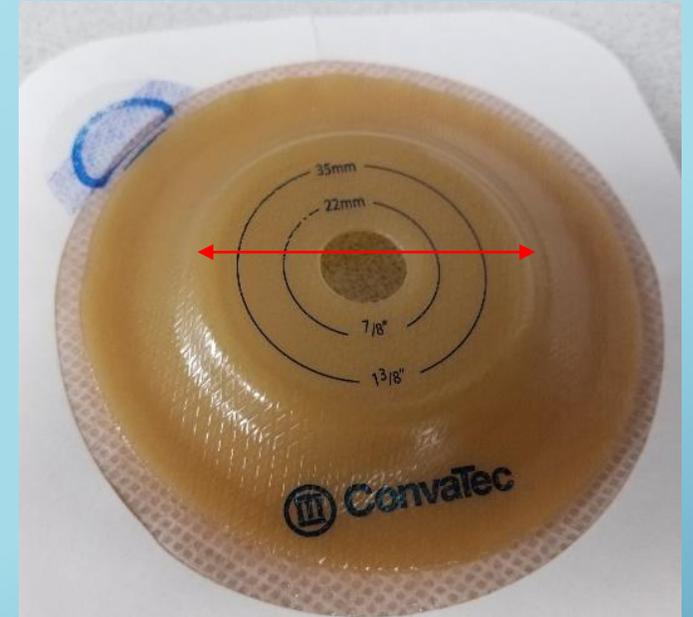
# Plateau Width on 2-Piece Skin Barriers



**Pre-Cut**  
Sur-Fit<sup>®</sup> Natura<sup>®</sup>  
Convex-It



**ConvaTec Moldable  
Technology<sup>™</sup>**  
Natura<sup>®</sup> CMT Convex



**Cut-to-Fit**  
Natura<sup>®</sup> Accordion  
Convex CTF



# Why Do We Use Convexity?

- To manage irregularities of the stoma
- To apply structural stability to the immediate peristomal skin - improving the projection of the stoma
- To create a better seal around the stoma to minimize leakage
- To simplify stoma management for the patient
- To help enhance the patient's quality of life



# How to open deep crease?

Stoma is located inside the crease

Used convex pouching system, the pouch continued to leak.

What can we do?



# Risks of Convexity

- Rigidity of barrier can cause pressure injury to the stoma and peristomal skin
- Convex products have been associated with development of:
  - Peristomal skin trauma
  - Peristomal pressure injury
  - Peristomal pyoderma gangrenosum<sub>9</sub>.



# Risks of Convexity

## Consideration of using convex after surgery

- Some clinicians will avoid using convexity immediately post operatively due to the risk posed to the healing mucocutaneous junction
- In my practice, we use convexity even post op day #1, if patient needed to use.
- Monitor and reassess pouching system on a regular basis



Picture provided by

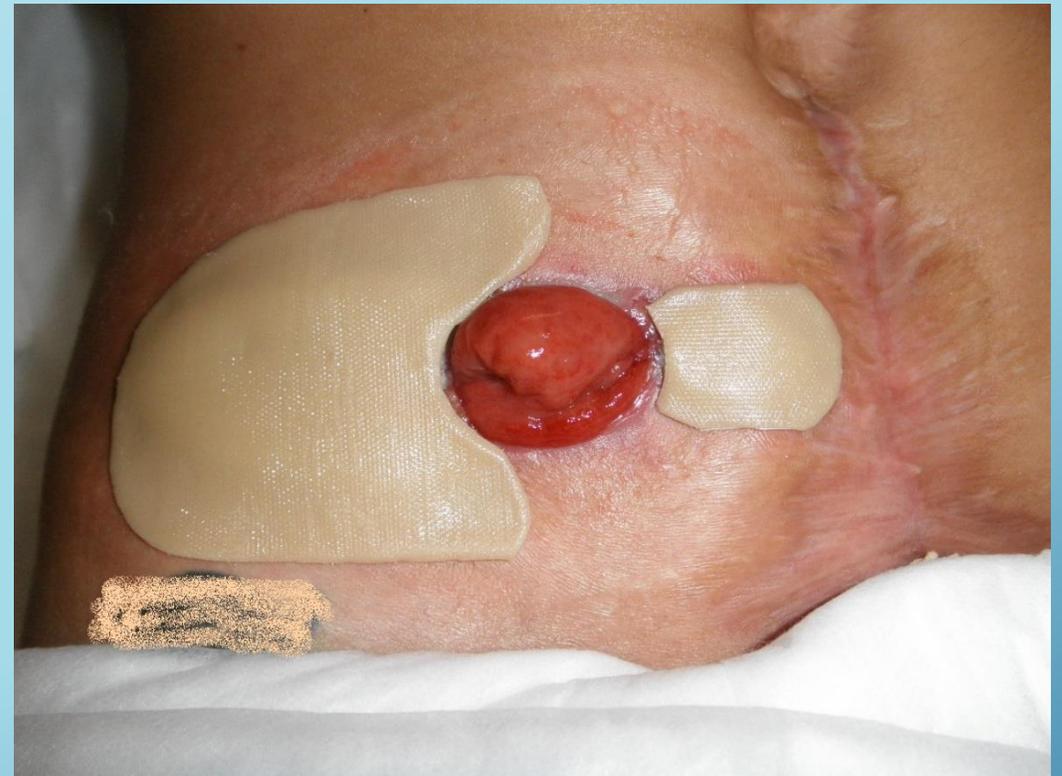
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# Ilesotomy with open wound

Pyoderma Gangrenosum: Open wounds around Ileostomy

Treat ulcer with hydrofiber dressing and cover with Hydrocolloid sheet to create pouch landing space



# Accordion Convex Flange

- Easier access to the stoma
- Still has slight pressure around stoma to stands up
- Easier to snap back on the pouch so that the patients does not feel discomfort



# Why is it important to fit the pouch?

- Better wear time
- Keep peristomal skin healthy
- Preventing skin complication
- Preventing trauma to the stoma
- Increase confident
- Increase Quality of Life (QOL)



# References

1. Erwin-Toth, P. & Krasner, D.L. Ed. Enterostomal therapy nursing: growth & evolution of a nursing specialty worldwide: a festschrift for Norma N. Gill-Thompson. 2<sup>nd</sup> Edition 2012.
2. Ricciardi, R., Mackay, G., & Joshi, G.P. in *UpToDate*: Enhanced recovery after colorectal surgery. Oct, 2021
3. Landman, R.G. & Cashman, A.L. in *UpToDate*: Ileostomy or colostomy care and complications. Jun, 2020
4. Colwell, J.C. Selection of pouching system: in *Wound, Ostomy, and continence nurse society core curriculum: Ostomy management*. Carmel, J.E, Colwell, J.C., and Goldberg, M.T. Edited. 2016.Ch.10 pg.120-147.
5. Rolstad BS. Principles and techniques in the use of convexity. *Ostomy Wound Manage*. 1996; 42(1):24-32.
6. Rolstad BS. 2006 Update: Principles and techniques in the use of convexity. Hollister Incorporated, WOCN Society 38<sup>th</sup> Annual conference, 2006
7. Hanley J. Convex stoma appliances: are we getting it right? *British Journal of Nursing (Stoma Supplement)*. 2013; 22 (16)
8. McNichol, L., Cobb, T., Depaifve, Y. et al. Characteristic of convex skin barriers and clinical application: Results of an international consensus panel. *JWOCN* 2022;48(6):524-532.
9. Cronin E. A guide to the appropriate use of convex stoma care products. *Gastrointestinal nursing*. 2008; 6 (2): 12-16
10. Hoeflok J; Kittscha J, Purnell P. (2013) Use of Convexity in Pouching. A Comprehensive Review. *Journal of WOCN*, 40(5) 506-512.
11. Healed Peristomal Ulcer [Photograph]. (n.d.). Retrieved June 14, 2019, from <http://www.wocn.org/page/ImageLibrary>
12. Turnbull GB. The convexity controversy. *Ostomy Wound Manage*. 2003; 49(1):16-17. [www.o-wm.com/article/1203](http://www.o-wm.com/article/1203) Accessed 29 February 2016.
13. Wound, Ostomy and Continence Nurses Society. (2017). *Convex Pouching Systems: Best Practice for Clinicians*. Mount Laurel, NJ: Author
14. Kruse and Storling, Considering the benefits of a new stoma appliance: a clinical trial, *BJN*, Vol 24, issue sup 22, pS12-18
15. Boyd. K. Clinical Protocols for Stoma Care - Use of convex appliances. *Nursing Standard*. 2004; 18(20): 37-38
16. Szewczyk MT, Majewska GM, Cabral MV, Hölzel-Piontek K. Osmose Study: Multinational Evaluation of the Peristomal Condition in Ostomates Using Moldable Skin Barriers. Poster presented at ECET, Paris, France, June 2013
17. Herlufsen P, Olsen AG, Carlsen B, et al, Ostomy skin study: a study of peristomal skin disorders in patients with permanent stomas. *Br J Nurs*. 2006;15(16):854-862
18. Bosio G, Pisani F, Lucibello L. A Proposal for Classifying Peristomal Skin Disorders: Results of a Multicenter Observational Study. *OWM*. 2007; 53(9): 38-43.
19. Cowell, J.C., Davis, J.S., Emodi, K. et al. Use of Convex Pouching System I the Post Operative Period: a national consensus. *JWOCN* 2022;49(3):240-246.
20. Technical data on file, reference document WHRI3940 TA238 2014, .