



Consensus and Disagreement Between Experts and Community Practitioners Asked to Make Therapeutic Recommendations for Early Breast Cancer (EBC)

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Background

Most patients with stage II BC will receive surgery along with systemic therapy, but no consensus exists among experts on the optimal use of neoadjuvant vs adjuvant therapy in many cases. Furthermore, treatment guidelines list multiple reasonable regimens for EBC but lack patient-specific recommendations. We have shown previously that online decision support tools can affect treatment decisions of community practitioners. In this study, we sought to determine areas of consensus and disagreement among expert faculty providing treatment recommendations for a 2015 decision support tool on EBC as well as those using the online tool.

Study Components

- Online decision support tool developed in 2014-20015 and expert recommendations were compiled in January 2015
 - Faculty: Peter Ravdin, MD, PhD (Program Director); Harold J. Burstein, MD, PhD; Ruth M. O'Regan, MD; Sandra M. Swain, MD, FACP; and Denise A. Yardley, MD
- The online tool included a total of 235 different patient case scenarios in EBC based on variations of the following criteria: neoadjuvant or adjuvant therapy, subtype, nodal status, tumor size, menopausal status, recurrence score, and BRCA1/2 status
- Tool users were prompted to select patient information and then indicate their intended clinical approach
 - Recommendations from the 5 experts are displayed
 - Users are asked whether the experts' recommendation confirmed or changed their intended clinical approach
- Tool online at: <http://clinicaloptions.com/ExpertGuidanceonEBC>

EBC Tool Screenshots (Example)

The screenshot shows the 'Expert Guidance on EBC' interface. It includes a navigation bar with 'Disclaimer', 'About', 'Instructions', 'References', 'Treatment Key', 'Contact COO', and 'Exit'. The main content area is titled 'Expert Insight' and contains a 'Patient Summary' section with questions about the therapeutic setting, tumor subtype, nodal status, and tumor size. Below this is a 'Response' section with a table of expert recommendations. The table has columns for 'Expert', 'Recommendation', 'Chemotherapy/Targeted Therapy', and 'Hormonal Therapy'. Five experts are listed, each with a specific recommendation and the corresponding therapy types. A 'Comments' section at the bottom notes that Expert 3 would also consider docetaxel/carboplatin/trastuzumab/pertuzumab for this patient.

Results

- 796 healthcare professionals sought guidance on 1475 patient case scenarios from April 2015 to November 2015

Table 1. Patient Cases by User Degree and Country

	Physician, %	Midlevel, %	Non-HCP, %
Overall (N = 1475)	86	6	8
US (n = 333)	79	12	9
Non-US (n = 1142)	88	4	8

Table 2. Patient Cases by Subtype

Subtype	Preoperative, n (% of Total)	After Surgical Treatment, n (% of Total)	Either Setting, n (% of Total)
HER2-, HR+	151 (10)	493 (33)	644 (44)
HER2+, HR-	118 (8)	107 (7)	225 (15)
HER2+, HR+	122 (8)	136 (9)	258 (17)
Triple negative	164 (11)	184 (12)	348 (24)
Total	555 (38)	920 (62)	1475

- All subsequent presented data analyses limited to eligible cases entered into the tool by healthcare providers (n = 1360)

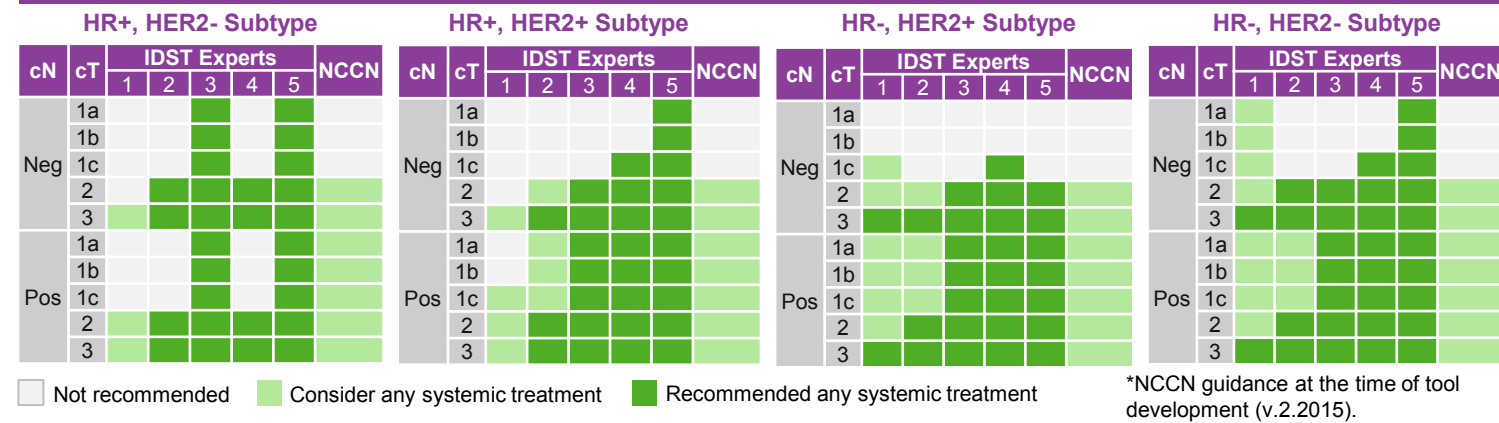
Table 3. Intended Use of Tool (n = 418 respondents)

A hypothetical patient case, % (n)	53 (221)
A specific patient in my clinical practice, % (n)	47 (197)

Table 4. Participant Responses: Did This Tool Change Your Treatment Choice?

Impact (n = 418)	Overall, n (%)	Real Cases, n (%)
Changed my treatment plan to agree with the expert recommendations	45 (11)	16 (8)
Confirmed my treatment plan (I agree with the expert recommendations)	313 (75)	151 (77)
I am still undecided on what treatment to use	24 (6)	12 (6)
I disagree with the expert recommendations	16 (4)	9 (5)
There are barriers to implementing the expert recommendations	20 (5)	9 (5)

Figure 1. Understanding When to Use Neoadjuvant Therapy for Optimal Outcomes*



- Experts agreed on starting with surgery in HER2+, HR- patients with node-negative, T1a or T1b disease; however, **only 30% of tool users agreed**
- Experts and users agreed in recommending neoadjuvant therapy for patients with node-negative or node-positive T2-T3 disease in **> 95%** of cases

Figure 2. Current Issues in HR+ EBC

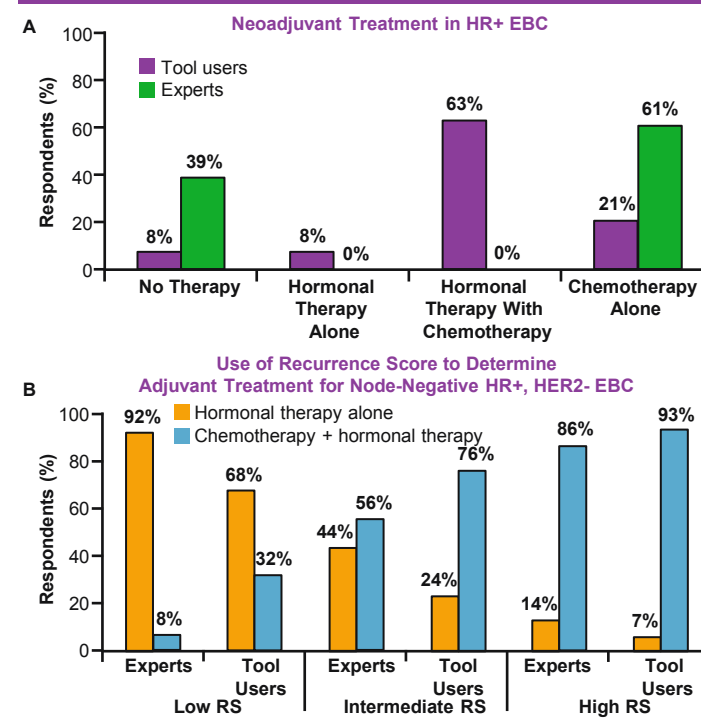
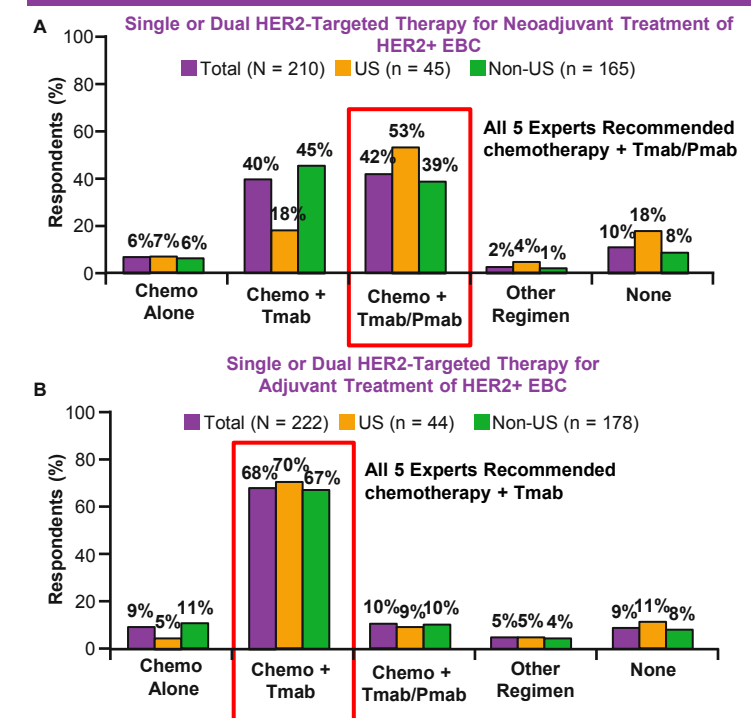


Figure 3. Discordance in HER2+ EBC



Conclusions

- Expert recommendations for using neoadjuvant therapy varies between tumor subtypes and differed from guideline recommendations
- Community physicians do not consistently align with expert recommendations for use of neoadjuvant or adjuvant therapy for many patients with EBC
 - Whereas experts did not recommend hormonal neoadjuvant therapy, 71% of tool users would use hormonal neoadjuvant therapy for HR+ EBC
 - Not all tool users have integrated dual HER2-targeted neoadjuvant therapy even though all experts recommended this treatment for HER2+ EBC
- This tool either confirmed or changed the user's intended clinical approach in 86% of cases
- Online tools that provide customized, patient-specific expert advice may aid clinicians in optimizing treatment decisions for patients with EBC