Consensus on the utility of breast cancer multigene signatures in routine clinical practice among European Breast Cancer specialists - The PROCURE project.

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Background: Several breast cancer multigene signatures (BCMS) are available to profile early breast cancer (BC) that, according to current evidence, can provide reliable information including the risk of recurrence. However, little is known regarding their current use and the perception of their utility across European breast cancer professionals.

Objective: To develop a consensus on the utility of BCMS in treatment decision making based on the opinion of a panel of breast cancer (BC) European experts.

Methods: A Steering Committee including experts from 8 European countries developed a Delphi questionnaire to be administered in two-waves to clinicians and pathologists across Europe, selected according to their expertise in BC. The questionnaire included 5 sections: 1) To assess panelists demographics and use of BCMS 2) to understand the current clinical practice in eBC and the use of BCMS, 3) to recall the panelists’ opinion on the utility of the BCMS in eBC according to the patient profiles, 4) to define recommendations on the use of BCMS in clinical practice and 5) to identify unmet needs and future applications of BCMS. Panelists were invited to answer anonymously the online Delphi questionnaire. 70% agreement was used to determine consensus on a specific topic.

Results: 141 panelists from 11 European countries answered the 1st wave questionnaire.

Panelists profile:
Panelists were 48.70 years old (± 9.47). 87% of them worked in a teaching hospital, 71% were medical oncologists and 11% pathologists. 93% of the panelists used BCMS routinely or in selected patients and 68% had more than 5 years of experience using BCMS.

Current clinical practice:
• Multidisciplinary tumour boards and national or international guidelines were the most important factors for making treatment decisions in the adjuvant setting.
• Nodal status was the main criterion used to decide about the use of a BCMS.
• 61% of the panelists use BCMS to assess the risk of distant recurrence and 48% to predict chemotherapy (CT) benefit.
Panelists used BCMS to define prognosis and treatment in the following settings (Fig. 1):

In order to be useful in clinical practice panelists reached a consensus on the following statements regarding the utility of BCMS (Fig. 2):

Conclusions:
• Multidisciplinary tumour board and international or national guidelines are the most important factors to define adjuvant setting treatment.
• Although no BCMS has shown to predict CT sensitivity in prospective trials, almost half of the panelists use these tools to predict CT benefit.
• Panelists support the idea that, in addition to genomic results, clinical and pathological features of the disease must also be taken into consideration
• The pattern of use of BCMS observed in the pre-menopausal setting reflects still some uncertainties and the need of additional research.

Fig. 1: Use of BCMS in different settings.

Main consensus reached:
Consensus has been reached on 26 out of the 70 items asked. Consensus was reached on the clinical utility of the information provided by BC molecular intrinsic subtypes to identify patients profiles that could safely avoid CT (77%) and for prognosis in early BC, HR+ (75%).

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GC has received honoraria from Pfizer, Novartis, Lilly, Roche; fees for expert testimony and medical education from Pfizer; and has participated in advisory boards for Pfizer, Roche, Lilly, Novartis, Seattle Genetics, Celltrion, Veracyte.